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ADVANCED MANAGEMENT

Quarterly Journal

*The Society for the
Advancement of Management*

Functional Roles of Union and Management

Fifty Million Stockholders

How to Build Industrial Peace and Prevent Strife

How Well Can Management Predict?

A Dynamic Approach to Management

Tomorrow's Cost System

Management-Labor Cooperation in Cutting Costs

December, 1947

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IN TWO SECTIONS—SECTION I

ADVANCED MANAGEMENT

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Comment

THE newspapers have recently recorded the decision of the General Electric Company to discontinue its profit sharing plan in favor of a pension plan—announced as costing more money and surely expected to be a stronger builder of corporate morale and loyalty.

As to the particulars of this decision, one would not dare venture a comment without more facts than the outsider possesses. But as to the underlying realities of motive, of purpose—of the developing of common aims and desires to get a job done with a will and at a fair cost—about these requirements a few reminders of basic psychological truths of personal and group effectiveness in shared action are, perhaps, never amiss.

Personal Motives for Cooperation

What, then are the roots of personal motive, of controlling purpose and desire, which move people to do cooperative acts in a sustained way? What is the price of unity of desire and of collaborative conduct? Unless the answer to these questions is clearly to the fore in the mind of every manager as every policy decision is reached, there can be no industrial peace and no creation of those common sentiments and enthusiasms which form the basis of high output, low costs, quality performance and uninterrupted production.

If human beings are to work together, there has to be provided not *for* them but *by* them a sense of material security of livelihood, of sufficiency of resources for that livelihood, of status that ministers to their self-respect and their sense in a democratic society of their personal worthfulness, dignity and integrity as individuals who are ends in themselves.

If human beings are to work together well, their work processes have to be facilitated by the provision of efficient attendant surroundings in every phase of operation.

If human beings are to enjoy and continue to associate agreeably with others in work, there has to be for the individual as person and through his association in groups of workers (in departments and in the whole corporate project) a sense that the importance of his ego or self is being built up. And it is built up most strongly and wisely as he finds that his own responsible, autonomous, creative effort satisfies him while it also produces goods. There is no personal growth of importance in the absence of self-assumed responsibility as to how satisfactorily the work process goes on. This

expression of the person in creative labor is both an individual and group performance. We seek, desire and require association—and productive association.

But all of this also assumes and requires that approval is offered as earned, that knowledge is supplied as needed, that criticism may be safely offered as warranted, that some stake (in security, sufficiency, and status) accrues and is assuredly built into life while energy is being expended in productive results.

There is no longer any mystery about why and how people act productively in association. We are such stuff as cooperation is made of, if the supporting psychological and economic settings that invite the release of energy are present. There is a price of collaborative zeal, a price which management has to be prepared to pay. But it is never an impossible price, nor a utopian price.

It is a common sense price which demands only that account be taken by managers of the motives that move men to do that which they want and yearn to do when they feel safe in doing it. The creative urge is strong; the building and manipulative desire is strong; the impulse to associate for good ends is strong; the sense of the goodness of subordinating the self to a goal bigger than the self is universal. Human nature may be counted upon to work an economic order.

But—and it is a large but—human nature will do these things only as there is clear assurance, gained through its own effort and its shared planning for agreed human ends, that personality is being protected and advanced.

Assuring Workers' Security

General Electric's change of tactics proves nothing for other companies about their tactics and procedures. These are matters for empirical determination in every specific situation. What General Electric is saying—and it needs to be listened to—is that if workers' need for security and long-term sufficiency is to be considered, measures to assure these have to be provided.

If one on the outside might venture one comment—relevant to this decision and to personnel policies in general—it is that to have given the workers a chance to share in the decision to change, or not to change, its current profit sharing procedure might almost surely have been an educational experience of incomparable

value, both to management and to the men. I surmise the shared decision would have been the same as that now promulgated by management. But the by-products

of common understanding out of joint deliberation would have been invaluable.

ORDWAY TEAD

In Memoriam

Herman Feldman, professor of industrial relations at the Amos Tuck School of Business Administration at Dartmouth College, passed away suddenly on October 16, 1947, at the age of fifty-three. There was thus removed from us, in the full flower of his usefulness and creative vigor, a liberal interpreter and exponent of that managerial practice which is scientific, democratic and therefore respectful of human personality. The world can ill afford to lose from the ranks of forward-looking thinkers this valiant spokesman of an outlook which needs defense and needs pioneering applications. Those who remain to carry on are the poorer for this loss, but they are also the richer for the memory of a fellow-servant of good causes in whom loyalty, friendliness and intellectual capacity were splendidly united.

Functional Roles of Union and Management

*An Approach to the Problem of Managerial Prerogatives**

By NEIL W. CHAMBERLAIN

Member, Staff: Labor and Management Center, Yale University

THE PENETRATION by unions into the functions and areas of management has created a problem of organizational stability. The operation of most large corporations, for example, depends upon agreement between management and union. In the absence of such an agreement, the corporation of stockholders, with their managerial representatives, and the union of employees become functionally meaningless and impotent. Neither can operate without the other.

There thus arises a compelling need for a joint understanding as to the roles of the management and union parties to the bargaining process. Some company officials have sought such a result by the device of seeking union agreement on certain managerial areas to be recognized as of sole concern to management and to which the bargaining process would be inapplicable. President Truman's Labor-Management Conference of 1945 demonstrated the union unresponsiveness to this approach. Even more important, however, aside from any question of its desirability, no feasible method of outlining boundaries of union influence has yet been shown. Historical, legal and institutional analyses of labor and corporate movements indicate no reason for supposing that the union movement can be held at any line of advance on the broad front of the operating areas of management.

Need to Resolve Differences

If boundaries of subject matter cannot be set to confine union activity, and if unions are to be allowed to continue their vital existence, there remains only the possibility of a functional integration of the union within the business enterprise. This does not mean that competing interests will not arise within the corporation; it does mean that organizational procedures must be provided to resolve differences which threaten the integrity of the business unit.

This is no easy task. It involves the acceptance of existing economic and political institutions, which are socially respected and which are thus modifiable only

within fairly narrow limits, to meet the pressing needs of the moment. At the same time it involves a recognition of underlying problems which such modification may only touch without solving, and the focusing of attention upon them so that broader changes which time and crisis may require at some future date may then be acted upon on their own merits, with an intelligent appreciation of why such action is required. In searching for solutions we must thus keep two time periods in mind; one, the short run, involving adaptations of institutions and behavior which are possible under existing conditions; two, the longer run, when more basic reformation may be necessary and for which adequate preparation must be made. In both cases, it should be our underlying assumption that the objective is to modify present institutions no more than is needed to meet the issues posed. There is value in institutional continuity for its own sake, aside from the fact that respect for habits of thought and action bodes better for the success of the desired change.

Bases of Integration

On the basis of an extensive investigation of the requirements, if, under collective bargaining, union and management are both to play meaningful and mutually accepted roles, and, confining our present interest solely to the large corporations of our society, we may set forth ten basic needs of a business organization in which management and the union have been successfully integrated. These are (1) an understanding and acceptance of the functional roles of the parties; (2) preservation of the integrity of the participants; (3) an understood, common system of responsibilities; (4) an understood, common system of authority; (5) a common communication system; (6) a joint compliance system; (7) adequate supporting facilities; (8) business effectiveness and efficiency; (9) mutual intent and good faith; and (10) acceptance by others. In these pages we shall be able to concern ourselves with only the first of these requirements, stated in the proposition that functional integration requires a clear

* The major portion of this article has been taken from a chapter of the forthcoming book, *The Union Challenge to Management Control*, to be published by Harper and Brothers.

understanding of the role each participating organization must play or may play in the business enterprise.

In terms of managerial functions, this requirement involves a delineation of the union's part in business direction, administration and execution. Briefly, we may say that direction establishes what is to be done and speaks with final authority, administration determines how it shall be done, while execution sees that it is done. In these terms we may come to immediate grips with the question of what constitute managerial prerogatives. Directive management operates within a framework supplied by the corporate charter and by-laws, the state corporation laws, and the general laws of the society in which it exists. Administrative management, in addition to operating within this same framework, must operate within the bounds prescribed by directive management and administrators in the organizational frames above it. Executive management must operate within the limits set forth by directive and administrative management. The prerogatives of management—regardless of whether its function is direction, administration or execution—are the total bundle of discretion which is permitted to it within the framework in which it operates. That framework may change, and with it the prerogatives.

Prerogatives Change

Management is thus considering legal, not functional, issues when it says that its existing prerogatives must be preserved undiluted if it is to function as management. Within the managerial structure, the prerogatives of management are constantly being changed—by management itself, as well as by state and federal legislation. Legislation limits directive management in its freedom of action, but likewise directive management, on its own initiative, limits the discretionary area of executive management. The framework of prerogatives is thus subject to constant change, but within that framework management retains freedom of discretion.

The union is challenging vested interests but failing to recognize organizational functions if it says that management has no prerogatives. It may itself assist in determining what are the prerogatives which management may exercise, but following upon such determination it cannot avoid leaving to management an area of discretion, of freedom of decision and action which constitute managerial prerogatives. It may join with management in establishing a directive frame-

work which includes rules governing, for example, the selection of production employees for advancement, but within that framework administrative and executive management have freedom in the application of those rules, subject only to the union's (or higher management's) check upon proper compliance with them.

In the earlier corporations, the owners of the business took an important part in determining the area of freedom to be permitted their managers, which is to say that they defined, within the law, the prerogatives of management. Berle and Means have provided us with an excellent portrayal of this practice:

"We have the picture of a group of owners, necessarily delegating certain powers of management, protected in their property rights by a series of fixed rules under which the management had a relatively limited play. The management of the corporation indeed was thought of as a set of agents running a business for a set of owners; and while they could and did have wider powers than most agents, they were strictly accountable and were in a position to be governed in all matters of general policy by their owners. They occupied, in fact, a position analogous to that of the captain and officers of a ship at sea; in navigation their authority might be supreme; but the direction of the voyage, the alteration of the vessel, the character of the cargo, and the distribution of the profits and losses were settled ahead of time and altered only by the persons having the underlying property interest."*

Role of Unions

The situation today is remarkably different in a number of ways from the conditions so pictured in corporations of a century or more ago. One of the most important respects in which circumstances have been altered is in the introduction of strong unions, capable of insuring a hearing for their views in the conduct of the business. Along with the owners and the government, they assist in establishing the conditions under which management must operate, in defining the area of management's discretion, in determining managerial prerogatives. This change in business operation has been summed up by one analyst thoroughly conversant with the industrial scene in the statement, "Modern business management must expect to operate within the framework of a system of industrial jurisprudence."**

This industrial jurisprudence, which consists of the

* *The Modern Corporation and Private Property*, page 135. These writers hold that this picture "probably was not unfair up to, say, 1835."

** Sumner Slichter, *Union Policies and Industrial Management*, page 2.

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collective bargaining agreement and its interpretations, accepted practices which are not subject to unilateral change, and understandings which are jointly respected, thus constitutes part of the framework defining management prerogatives. Within that framework management retains freedom of operation. The important question remaining is the nature of the union's participation in the processes of industrial jurisprudence.

It must be recognized that the union's participation in the collective bargaining process is itself the exercise of a managerial function. The union leaders are actually *de facto* managers. They are to be distinguished from a legislature which passes general laws forming part of management's framework of prerogatives, and which is not management, in that their decisions with which we are concerned are decisions made *within* the corporation of which their members are employees. They are concerned with specific problems of specific corporations in which they play a continuing role. The unions, moreover, join in the establishment of operation of certain corporate processes, such as the compliance system. Where collective bargaining prevails, the continuity of business operations is dependent upon their collaboration.

To the extent that the union participates in forming controlling policies and joins in making final decisions, it is participating in the directive function of management. This is commonly true in negotiations leading to the collective bargaining agreement. That agreement constitutes part of the framework within which administrative and executive management must operate, and, in the subject matter which it covers, bears the stamp of final authority. None of the policies or decisions of the agreement is subject to modification, for the life of the agreement, by any authority other than the joint conference from which it originated.

Within this directive framework, however, administrative management remains free to operate. Its decisions as to how the objectives of the collective agreement are to be realized remain within its discretion. This area of discretion may be narrow with respect to some areas of operation, and wide with regard to others. In the matter of layoffs, for example, it may be rigidly bound by seniority provisions but in all other respects retain freedom of decision. Faced with a need for economy caused by declining sales, administrative management may thus be eligible to determine how many employees shall be laid off (an administrative decision as to how economy is to be effected) but

once having determined the number it will be controlled in the designation of such employees by the seniority provisions of the agreement (a directive policy, since emanating from final authority, establishing what shall be done under stated circumstances).*

The operation of a large corporation is a complex business. Its manifold activities require a continuing stream of decisions, emanating on a day-to-day basis. A wide latitude of discretion is required if flexibility is to be retained in meeting the problems which each new day brings. Such decisions are the province of administrative management in its determination of how the objectives set forth by directive management are to be accomplished. This is what one corporation official has in mind when he says "A broad purpose and a broad decision require fragmentation of purpose into detailed purposes and of principal general decisions into detailed subsidiary decisions."** In this steady flow of administrative decisions the union cannot play the *same* role as in the directive function if the requirements of flexibility, expedition and organization are to be met. It participates in providing the framework within which administrative discretion is to be exercised; it cannot participate in the *same* manner in administration itself without sapping the vitality of the business enterprise.

Union Also Participates in Administration

This does not mean that the union can play no part in the function of administration, however. It merely means that its administrative role is governed by considerations not present in its directive capacity. In the organization of the corporation the union frequently participates in decisions at every level of organization. Administrative participation is particularly evident when local plant negotiations supplement a company-wide contract, but it is likewise present when the foreman consults with the steward. The factor which distinguishes such administrative participation from the union's role in direction is the absence of final authority on the part of its representatives as well as those of management.

Each "frame" or level of the corporate structure operates within a framework which defines the dis-

* The essence of direction is the finality which cloaks it and not the importance or generality of its decisions. The latter are frequent but not necessary accompaniments. The collective bargaining conference, in its directive capacity, may attend to such minor matters as the use of company bulletin boards, just as the Congress of the United States may decide whether John Jones shall be paid \$300 compensation for injuries sustained when struck by a post office truck. The union participates in this directive function whenever it joins in a decision which is not subject to reversal by any higher authority.

** Barnard, *The Functions of the Executive* (1938), page 206.

tion permitted to management at that level. It cannot exceed those bounds, which are prescribed by the successive policies and decisions handed down from the frames above. The union may participate with management in the administrative process subject to the limitation that it is bound by the same framework of discretion within which management must operate. It may play an important contributing role by providing administrative management with factual information and a point of view which might otherwise be lacking. Good administration requires an examination of all facets of a problem before a decision is reached. The union can assist in that examination, and seek to influence administrative decisions in which it feels its interests are involved. It cannot, however, bring its influence to bear in an attempt to secure a decision which transcends the area of discretion of the frame within which it is operating without endangering the organizational structure of the enterprise.

Limitation of Union Authority

The union joins in final authority only in the directive frame. In all subsidiary frames the decisions which it seeks must be reached within an area of discretion which is not complete and which is not final. It must accept as an organizational absolute that *it cannot exercise final authority on administrative matters*, as it does in direction. Two considerations are wrapped up in this organizational necessity of the union's recognition of the function and sphere of administration.

First, the absence of final authority in any administrative frame together with the limitations on the freedom of action of management in the frame imposed by authorities in the frames above it mean that its decisions and actions are circumscribed in a manner which is beyond its control. This is a principle of organization which the unions readily recognize within their own structures but they are sometimes less willing to accept it within the business enterprise. In a number of instances, as management will testify, they have operated *within an administrative frame* as though management in that frame held final and complete discretion as to its course of conduct. They have sought agreement on a matter which management at that level was powerless to consider and have accepted its explanation of this fact only as a stall or a run-around. They may, of course, legitimately question whether such management should not be given the authority which it lacks, and they may take action in higher administrative frames or in the directive process to attempt to

confer such authority on it. But until the area of discretion in that frame is redrawn, their issue cannot be settled here. It may be settled only in a higher frame where discretion is present. As a prerequisite to their participation in the administrative process, then, the unions must accept the given "frame-within-frame" structure of the enterprise,* with the respective areas of discretion. They must operate, administratively, within the boundaries prescribed.

As a second consideration stemming from the fact that participation in the administrative process involves operating within a framework where discretion is neither complete nor final, the union must be prepared to see its administrative agreements reversed by higher authority. This harsh requirement cannot be avoided. Joint agreement in the administrative process cannot serve to bind the directive or higher administrative officers of either union or company unless the whole concept of final authority and its delegation is to be discarded. Joint agreement on an administrative matter may indeed be reached, and frequently is, but it may stand only so long as the higher officers of both union and company accept it. The union can participate in administration, but it cannot impose final authority in administration. Final authority rests only with direction.

Reversal of Administrative Decisions

The nature of administrative decisions, even within a framework, can never be fully predicted. The range of possible choice can never be wholly foreseen and if higher authority—either of union or company—finds unacceptable a decision reached in a lower frame, it remains free to reverse the decision. A union which joins in the administrative process must necessarily accept this hazard.

If the union may participate in direction and in administration, may it likewise participate in execution? The answer must be No. Little in the way of discretion rests with executive management. It is the function of execution to see that the job is done in the manner which administration has decreed, to organize and direct personnel in the performance of a prescribed task according to prescribed methods. In the absence of a discretionary area, there is no room for sharing authority in this task. The union may be given executive responsibilities which it alone is charged with fulfilling. It may assist executive management in the per-

* This phrase is Harlow S. Person's; the concept of the frame-within-frame organization is set forth by him in "Research and Planning as Functions of Administration and Management," *Public Administration Review*, Volume 1 (1940), pages 65-67.

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formance of its function. It cannot, however, share the same executive responsibility with management without introducing confusion. In the executive responsibilities of the shop, the union steward may assist the foreman, but he cannot share equally his authority.

In terms of the first criterion by which the functional integration of the union within the large corporation may be tested, we may say then that the union may participate in the direction of the enterprise; it may likewise participate in its administration, accepting the requirements of operating within the discretionary boundaries of each frame and of recognizing that higher authority may overrule it; it may not share in the function of execution, though it may be delegated executive responsibilities.

Is there at the present time a clear understanding on the part of both union and management as to the nature of these functional roles of the union? It is difficult to say, but the answer is probably in the negative. In some instances management in an administrative frame has been reluctant to share its authority with the union, despite the example set by its superior either in higher administrative brackets or in the directive process. Though possessing the discretion to act, it has sometimes hesitated to reach an agreement with the union. In some cases this reluctance may be traced to a fear that agreements may be frowned on by a higher management not desirous of extending the influence of the union. A freer exchange of views between management and union representatives in all the administrative frames has thus been retarded.

On other occasions the union has failed to recognize the limitations of participation in administrative matters and has refused to accept as datum the area of discretion within which management in a particular frame must operate. It has sought to bring to administration a final authority and has sometimes struck when agreements reached on administrative levels have been overturned by higher authority. It cannot be denied, however, that it has sometimes found this method the only one capable of securing for it an audience with management in a frame possessing adequate authority to settle the issue involved.

The charge is frequently voiced by company officials that stewards in the shops have usurped the foreman's executive role, countermanding his instructions or issuing orders of their own. They cite instances when

workers under the foreman's direction have challenged his executive capacity.

Appreciation of Organizational Processes

These are all either examples of a lack of understanding of the role which the union may play, or of a failure to translate such an understanding into practice. It is clear, however, that this deficiency in the collective bargaining relationship is one which the parties on their own motion may overcome. No institutional changes are required to encourage this aspect of functional integration. Only a more thorough appreciation of the organizational processes of the business enterprise, as they relate to the union, is needed, along with a genuine desire and willingness to act in such a manner as mutually to accommodate each other's role while jointly preserving the business structure. In some quarters there are signs of an explicit acceptance of the function of the union as here outlined, though the terms employed may differ. There is ground for optimism when a representative of a powerful national union explains that "The Union wishes to share the policy formulation through annual negotiations culminating in a contract between labor and management. Insofar as policy execution is concerned, the Union wishes to reserve the right to challenge the company through the grievance machinery, if the Union feels the executive policy to be in contradiction with the contractual provisions."

Application must follow profession before we may feel satisfied, of course, but an understanding of the union's role in the managerial function is a pre-requisite to its application. Union and company officials seldom discuss the role of management except when engaged in controversy over a specific issue, and then only in terms of the assertion of "rights" by one which are denied by the other. It is worth speculating on the advantage to both parties of entering into an exploration, free from partisanship and theoretical in nature, of the managerial function in the large corporation, designed to clarify for both the requirements of the function and the manner in which the union may be brought within its terms. It is easy to ignore the fact that collective bargaining has materially changed the form of our business organizations. Worthy of attention of the best minds of company and union is an examination of the business procedures required by that change.

Fifty Million Stockholders

By BERKELEY COX*

ONCE UPON a time most craftsmen, unless they were slaves or serfs, owned their tools and individually made and sold the products of their hands. Only those who believe in fairy tales think that time can be restored. Mass production has proven so tremendously superior in its ability to supply material needs that a return to handicraft methods is unthinkable. Mass production has, however, made the worker an employee. It has diminished his incentive to do as much work as possible and to do it as well as possible. It has separated ownership from labor. In many cases that separation has brought antagonism.

America and the Future, a pamphlet which was the result of studies by a committee of *Time*, *Life* and *Fortune* editors, describes as follows the change in the class structure in America, taking as its starting point the "simple factory system," an intermediate stage between handicraft and large scale mass production:

This change was due in part to technological developments and in part to a legal novelty, the modern corporation. Whichever was the chicken and which the egg, together they transformed the industrial scene. In place of the simple factory system, with ownership, management and labor all in the same small town, they brought a system of gigantic pools of capital owned by thousands of stockholders, equally big pools of labor, and a new management class running the whole vast operation. General Motors, for example, in 1939 employed 220,000 workers in 90 plants. It would be hard to think of a more efficient production pattern than General Motors. But its social pattern is revolutionary.

Going down a roster of G. M. employees, how would you like to separate the members of the "middle (i.e. proprietary) class" from those of the working class? You could not tell by the color of a man's collar, for many a toolmaker owns his house and some G. M. stock and many a clerk doesn't. But neither toolmaker nor clerk is his own proprietor. That "proprietary" middle class, into which the worker hoped to graduate and which was the bastion of Eighteenth Century freedom, has for all practical purposes ceased to exist within General Motors.**

While it is impossible to bring back the individual owner-worker as the typical producer of manufactured goods, it may not be impossible to restore the identity

* The author of this article is on the law staff of a large corporation. The ideas expressed are, however, entirely his own, and are not in any way to be attributed to the management of the corporation for which he works.

** Originally printed in *Life*, September 13, 1943.

of interest—to have the worker feel again that his success and the success of his business are synonymous. In the second of the very able series of articles by Peter F. Drucker on management-labor relations, which appeared in *Harper's* magazine last November, December and January, he says, "if we are going to develop a pattern of industrial peace, a genuine partnership between management and worker, we must work out new fundamental approaches and policies." The purpose of this article is to suggest a new approach. It is suggested with humility in the hope that those who are better able than I to evaluate it may give it some thought.

The suggestion here to be made is no more applicable to General Motors than it is to a thousand other corporations. In fact, if it is put into practice, it will be much more likely to be tried first by some comparatively small business organization, and probably one which has not had serious labor disputes. It may not be amiss, however, to follow the reference to General Motors as an outstanding example of mass production enterprise with one more quotation, this time from the Business News Section of *The New York Times* for February 9, 1947:

A research study of the relations between the General Motors Corporation and the CIO United Automobile Workers, which is nearing completion at the Industrial Relations Center of the University of Chicago, strikingly confirms the major conclusion reached at last week's conference of Public Relations Executives in this city, to the effect that the American system of free enterprise faces a life-and-death struggle for power with the advocates of planned economy in one form or another.

... Far-sighted exponents (of private enterprise) are seeking not only new legislation to curb the powers of certain union leaders to wreck the American system but also ways and means of labor-management cooperation to make the system work better and better in the public interest, so that the American people will continue to enjoy a higher standard of living and a higher degree of political freedom than any other country in the world, as it does now and has done in the past. They regard this as the surest guarantee of survival.

Inventions are not made all at once. Each is the product of learning and of work that has gone before. The start of the invention of the automobile was not some fifty years ago, when internal combustion engines

were mounted in vehicles to make the wheels turn. The start was at least as far back as that time in hazy antiquity when some one made a wheel. So with the legal invention of the modern business corporation. Its roots may be found in the law of ancient Rome, if not earlier. It has developed over the years just as mechanical inventions have done, and there is no need to consider its development ended.

Workers' Stock

The new approach here suggested to the restoration of identity of interest between owner and worker is a further development of the business corporation—a new kind of corporate stock. In order to have a name by which to refer to it, I shall call it workers' stock. It would be issued to, and would be owned only by, employees. This stock would have the same voting rights and be entitled to the same dividends, share for share, as the common stock of the corporation. It would not, however, entitle the holder to any share in the assets of the corporation. It would be non-transferable and could neither be bought nor sold. A certificate showing the number of shares of workers' stock to which an employee is entitled would be issued to him without charge when he becomes eligible by meeting certain requirements. Upon termination of employment, the certificate would become void and the record of it would be stricken from the stock register.

This would be a new type of corporate ownership, a property right appurtenant to the job, much as a right of way is appurtenant to the ownership of a piece of land and is transferred automatically with a change in that ownership.

Giving the employees a share in the management and in the profits of the business is by no means a new idea. What is new, so far as I know, is the mechanism for accomplishing that purpose and the mechanism may be as important as the purpose. A spade and a tractor-drawn plow are mechanical devices for the same purpose, but not of equal effectiveness. This particular mechanism would put the worker on the same basis as to voting rights and participation in profits as the holder of common stock, thus creating a correlation of interest between them. It has the additional advantage of being adapted to an almost infinite variety of plans.

The stock could be issued to all employees, or it could be limited to employees with five years or more of continuous service, or to salaried employees, or to wage earners, or to employees earning more than some selected amount, or to executive and supervisory em-

ployees only. Of course, if the ownership of workers' stock were too closely restricted, it would not accomplish the purpose of bringing closer together the interests of the general run of the employees and those of the common stockholders.

It would not be necessary to issue the same number of shares of workers' stock to each employee. The number of shares could be based on the position held, length of service, salary, or a combination of these factors. It might even be possible in some corporations to set up a method of rewarding outstanding individual achievement by the issuance of additional shares of workers' stock. Not only can any corporation devise a plan to fit its own particular situation but the plan may be revised from time to time until it is satisfactory, or discarded if it proves totally unworkable, provided the right to revise or terminate it is reserved when it is first put into effect.

There are, of course, arguments to be made against this idea. In the minds of some corporation executives, and perhaps in the minds of some labor leaders also, these will loom so large as to cause its immediate and unqualified rejection. Others might wish to balance the advantages and the disadvantages expected to flow from its adoption. Probably no final answer can be given except by the test of actual trial.

The most obvious, though perhaps not the most important, objection, from the standpoint of the common stockholder, is that the issuance of workers' stock would mean a division of the owners' profits with the employees of the corporation. This objection can be made to any profit-sharing plan. It resolves itself into a question of whether the additional loyalty, initiative, diligence and continuity of work to be obtained by making the employees also shareholders will pay for itself in increased profits. The answer depends in large part on the situation of the particular corporation involved. It is evident that more than a mere token number of shares of workers' stock would have to be issued to each stockholder-employee to accomplish worthwhile results. The present stockholders would have to decide whether they can afford to divide the profits to the extent that would be required by an effective plan. Perhaps the question may be, "Can we afford not to?"

Comparative Risks

The stockholders of a corporation run the risk of loss if the business is unprofitable. Why should they divide the profit when it is profitable? This argument

undoubtedly has validity with respect to new enterprises where the risk of loss of capital is great and where the profits, if there are any, may also be great. Such new businesses could either wait until the experimental period is over and they have become firmly established before adopting a plan for the issuance of workers' stock, or a plan could be adopted earlier by which the employees who stick through the difficult initial period would be rewarded, if the venture proved successful, by becoming stockholders at the end of a period of years. As to established and stable business corporations, the argument that the stockholder runs all the risk and therefore should have all the profit is less strong. It is not likely that the business will fail, but if it does, an employee, particularly if he has worked for the same company for many years, may suffer as much in the loss of his job as a stockholder does in the loss of his investment. If business is poor and there are no profits, the stockholder loses his dividends; the employee may get his usual salary or wages, but on the other hand he may have to take a cut in his pay or be put on part time or even be laid off indefinitely. Generalizations as to which is the greater loser are not convincing.

Advantages During Depression

Aside from this argument as to who is the greater loser when there are no profits, there are practical aspects of a workers' stock plan in periods when business is poor to which stockholders might give consideration. Employees who are themselves stockholders and who receive the same dividends as common stockholders may be satisfied with lower salaries or wages than would otherwise be the case. They may work harder, especially when the going is rough, to keep ahead of the corporation's competitors and to keep the dividends coming, with resultant advantage both to themselves and to the common stockholders. Such a plan, in short, may reduce the cost per unit of product and thus be helpful in tiding over periods of depression as well as in making the profits for all larger when business is good.

From the employees' standpoint the additional income from dividends on workers' stock may be disappointingly small, particularly at the inception of the plan. In the average corporation if the entire amount paid in dividends to stockholders were distributed among employees in proportion to their earnings, it would not amount to more than the pay increases which, in many instances, have recently been given.

However, the dividends on the workers' stock would be some increase in income and the more profitable the business, the larger the increase would become. Each employee would have an incentive not only to do more and better work himself but also to see that his fellow employees do more and better work. Perhaps of even more importance than the financial incentive would be the feeling that he had a stake in the business, that he had a voice, no matter how small, in management, that he was a co-owner with the other stockholders.

Mr. Drucker, in the article already quoted, says that "the greatest long-term threat to our political and economic system is the worker's opposition to increased efficiency and to profits." He puts emphasis on the importance of giving the worker a sense of citizenship in the plant. Not only should the ownership of workers stock give that feeling directly, but also it should give an impetus to other means of promoting it which Mr. Drucker suggests. If there is a question as to whether the dividends on workers' stock are to be paid in cash or used in some other way (for example, to provide retirement pensions), the answer could be determined by the owners of that stock. Suggestions for the betterment of the business would be encouraged. Individual or departmental incentive plans would be promoted rather than hampered.

While labor leaders who have at heart the true interest of those they represent should favor such a plan, provided it included a sufficiently broad part of the working force, there would doubtless be some who would argue against the principle and many who would argue over details of a plan adopted by a particular corporation. The more selfish among them might, with good reason, be fearful of the loss of their influence. The eventual result of the plan's adoption might be to make a labor organization and collective bargaining and strikes unnecessary. But if this should eventuate the union would not be broken; it would simply be outmoded because the workers would have been given a share in management and in profits satisfactory to them.

Effect on Economic Fluctuations

An economist might make the objection that if such plans were widely adopted, the effect would be to increase the fluctuations between booms and depressions. If the adoption of workers' stock plans should have the happy result of decreasing conflicts between labor and management and increasing productive efficiency, that would probably more than counterbalance

any ill effects resulting from the worker's return for his efforts being partly in the form of dividends. Whether the total national income would fluctuate more in an economy where workers' stock plans were widely used than in one where compensation is on the basis to which we are accustomed is a debatable question when the effect of depressions on employment and payroll is considered. Limiting the issuance of workers' stock to employees with several years of service would help to keep down whatever fluctuations might result from this course. The objection on this ground would have no effect in any event unless workers' stock plans were quite generally adopted. They would not be so adopted unless they proved their worth in other respects.

Even if the economic effects of a general adoption of plans for making employees shareholders may on the whole be good, how about the political effects? If the political influence of Capital (meaning large corporate aggregations of capital) and Labor (meaning powerful organized aggregations of laborers) were combined, would they not run the country as they chose? This is another long term objection as to which there might be much argument. I shall only attempt to suggest a thought or two in connection with it. Unless Capital and Labor do find a way to reconcile their differences, we may find ourselves forced to government ownership and operation, or at least to more government regimentation, of our business enterprises and freedom of contract, which is more dangerous to individual freedom than anything which might result from giving employees as such a participation in the management and profits of corporations.

If there were any expectation that Capital and Labor, assuming an amalgamation of their interests, would act politically as a unit, that might well give pause to the proponents of any plan tending toward such an amalgamation. But there is little reason for any such expectation. Shippers would still have interests adverse to those of carriers, manufacturers of goods for export would still not see eye to eye with other producers who want to protect their domestic market by a high tariff, the interests of banks and insurance companies seeking a good return on their investments would still not be the same as those of corporations wishing to borrow money for plant expansion, wholesalers and retailers would still want to buy as cheaply as possible and manufacturers to sell for the best price. In short, the diversities and conflicts of interest in our national economy would still exist as a safeguard against complete dominance by any one group.

Problem of Income Tax

But let's get back to earth. What about the income tax? Everything these days seems to bring up that question. The income tax, it must be admitted, could have a seriously deterrent effect on a workers' stock plan if the dividends paid on that stock are considered to be in the same category tax-wise as other dividends. If so considered, they would be taxed as income both to the corporation and to the persons receiving them. However, profit sharing payments which are reasonable compensation to employees for services rendered are deductible as business expenses and the Internal Revenue Bureau might properly rule that dividends on workers' stock are so deductible. In a memorandum opinion of the Tax Court of the United States rendered December 24, 1943, in the case of A. and M. Karagheusian, Inc., the corporation was held entitled to deduct dividends paid on Class A stock held by certain of its "key" employees. This corporation had outstanding preferred stock, non-voting Class A common stock which was issued to employees without any payment other than their services, and voting Class B common stock. Each holder of Class A shares had entered into a repurchase agreement with the corporation and the shares were not otherwise salable. This was, in essence, a workers' stock plan but with participation limited to top personnel. The argument for deductibility of dividends under the workers' stock plan here suggested seems at least as strong as the successful argument for deductibility in the Karagheusian case. If the dividends are not deductible under the present law, Congress can, of course, allow the deduction by an amendment.

Relief from Double Taxation

There is a good deal of agitation now for an amendment to the income tax law to give relief from the double taxation of corporate dividends. It might be interesting to speculate as to the effect of the adoption of workers' stock plans on the taxation of corporate dividends generally. In a democracy, taxes are likely to be used to force a wide distribution of wealth if such distribution does not result from the operation of economic processes. The reverse also is apt to be true.

Incidentally, one of the nice things about this idea of workers' stock is that it requires no governmental action whatever, unless perchance an amendment to the income tax law should be found necessary. Businessmen can do it for themselves without running to

Washington for help or even asking for a new law from the state legislature.

All the objections so far mentioned are not too difficult to answer or to brush aside. The big objection, in all probability, by the owners and managers of corporations to the suggestion for the issuance of workers' stock will be that it endangers their control over their businesses. The validity of this objection will vary among different corporations, depending not only on the mutual relationship of the management and the workers in each business but also on the possibility in that particular corporation of allotting to each participating worker enough stock to make him feel that the company's interests are his interests without depriving the present owners of the control over the business which they naturally feel belongs to them. The plan adopted can give effect to these considerations.

Hypothetical Case

The Agricola Canned Soap Company, for instance, has one million shares of common stock on which for several years dividends of sixty cents a share have been paid annually. It has three thousand employees, two hundred of whom are officers, department heads and supervisory people. The average period of service of the executive and supervisory group is fifteen years. Of the remaining twenty-eight hundred employees, fifteen hundred have had more than five years' service and the average period of employment of these fifteen hundred is twelve years.

This company might adopt a plan of issuing to each officer, department head and supervisor two hundred shares of workers' stock, plus ten shares for each year of service over five, and to each employee not in this group who has more than five years' service one hundred shares, plus ten shares for each year of service over five. At the inception of the plan officers, department heads and supervisors would have an average of three hundred shares each and the total issue to them would be sixty thousand shares. The other employees who qualify would average one hundred and seventy shares apiece and the total initial issue to them would be two hundred and fifty-five thousand shares. In order to continue the same dividend rate, the profits available for dividends would have to be increased from \$600,000 a year to \$789,000, or by a little less than one-third. The Agricola Company stockholders have to consider whether this is a reasonable increase to anticipate if the adoption of the plan succeeds in bringing home to the workers that increased profits are going

to be directly reflected in more income to them and in larger participation in the income for each year of future service.

The total voting strength of the workers' stock would be substantial in the case of this hypothetical corporation but at the outset of the plan it would be less than one-third of the voting strength of the common stockholders. Even at a considerable rate of increase in the number of workers' shares outstanding, due to probable longer average periods of service, it would be a good many years before the number of workers' shares equalled half the number of common shares.

There would, in all probability, be some pressure to increase the number of workers' shares. This might come from two directions; first, from the employees with less than five years of service to have stock issued to them, and second, from the employee-stockholders to obtain more shares. The second of these pressures should tend to offset the first. The holders of workers' stock would have the same interest as the common stockholders in not having the profits more thinly spread by increasing the number who share them. The newer employees would have the incentive of knowing that at the end of five years they would start sharing in the profits, especially if they are to receive a sizeable number of shares at the end of this qualifying period. Whether five years, or three, or two, or ten is the best qualifying period is a matter of judgment to be determined at the outset by corporate managements and modified thereafter by the process of trial and error and the interplay of varied interests.

Possible Developments

If the adoption of a workers' stock plan is attempted and proves unsatisfactory, it can be discarded, albeit it must be admitted, probably not without some difficulty even if the right to discontinue it has been reserved. If it should prove satisfactory from the standpoints of administration, production and profits, time and experimentation would determine its final form or forms. Perhaps a form of productive enterprise would develop in which capital for well-established businesses would be furnished entirely through bonds and preferred stocks, and the workers, including management, would have full control of the enterprise so long as fixed charges were met. Perhaps an additional or alternative form would evolve in the separation of the ownership of plant and the ownership of production through the medium of separate corporations—one corporation

controlled by the workers operating the business in a plant rented from another corporation controlled by investors. Even if the eventual pattern, making due allowance for risk-taking in the establishment of new businesses, should turn out to be that capital in established enterprises is limited to a fixed return and the risk of profit or loss after paying capital hire belongs to the workers, may this not be desirable from the standpoint of our total economy? It would still be private enterprise.

The ownership of the means of production by the people for operation in the common weal has a tre-

mendous appeal. The Soviet Union has attempted this through the medium of government control with certain results which are not palatable to us. There is a point, however, for working toward eventual widening of the ownership group within the framework of our type of economy, which would not disenfranchise the present owner but would extend the benefits as well as the responsibilities of ownership to many more people. It is to be hoped that in time even the Soviet Union might modify its approach toward that direction with the consequent lessening of the differences and resulting friction between our two great nations.

ORGANIZATION OF ADMINISTRATION

LEVEL OF AUTHORITY	TYPE OF RESPONSIBILITY	GENERAL FUNCTION	EVOLUTION OF POLICY	EXTERNAL IMPACTS UPON POLICY
STOCKHOLDERS	OWNERSHIP	ULTIMATE CONTROL	PERIODIC REVIEW OF POLICY	
ADMINISTRATION — CHIEF AND ASSOCIATED ADMINISTRATORS	POLICY DETERMINATION	ADMINISTRATIVE CONTROL	ESTABLISHMENT AND DEVELOPMENT OF POLICY	CONSUMERS INDUSTRY
MANAGEMENT — CHIEF AND SUBORDINATE EXECUTIVES	POLICY INTERPRETATION AND APPLICATION	BUSINESS DIRECTION	POLICY RECOMMENDATION THROUGH SYNTHESIS OF EXPERIENCE AND RESEARCH	GENERAL PUBLIC GOVERNMENT
OPERATION — SUPERVISORS AND EMPLOYEES OF RANK AND FILE	ADHERENCE TO ESTABLISHED POLICY	ROUTINE PERFORMANCE	PRODUCTION AND UPWARD FLOW OF SIGNIFICANT OPERATING DATA	

Through an unfortunate oversight, the above chart was omitted from the article, "Evolution in Organization During the Past Decade," by Dr. Harry A. Hopf in the issue of September, 1947, where it is referred to on Page 109. This chart, as a part of that article, is covered by its copyright of 1945.

—Editor's Note.

How to Build Industrial Peace and Prevent Strife

By EDWARD L. BERNAYS*

Counsel on Public Relations

PUBLIC opinion on most important issues goes through an evolution. The public first sees only a small part of the issue just as it sees only the top of an iceberg. Then as educational activities are carried on by groups that want the public to see the whole iceberg, people gradually see more and more until they get a full view of the subject—they see the peak and they see the larger submerged part.

This has happened on the whole problem of industrial relations.

I can assure you that this question is highly visible today. There is a growing feeling that sound industrial and human relations are basic to our development. Your educational efforts have brought the matter right out in the open.

I'm going to talk to you from the public relations standpoint. I have made a study of public attitudes to labor relations problems. I have had a good deal of experience in day-to-day contact with these problems. I have studied your educational program. Perhaps an objective point of view may be of some help to you in appraising what may be done in addition to what you are already doing.

It appears to me you still have an important piece of work to do, namely, to carry on a fundamental factual educational campaign; to instruct the general public, management and your union members on the bedrock facts of our struggle for industrial growth.

All of us want and expect a better America, a better home town, a better life, with security and employment for our people.

America a Battlefield

We haven't succeeded yet. We have disagreements and conflict on how to get the better life. We are beset by psychological and economic insecurities. Cynicism, disillusionment and frustration undermine our morale. We have turned our aggressions against our own people instead of a common enemy. America is a battlefield for ideological and group struggles: white versus Negro; native born versus foreign; man-

* A talk delivered as a public service at the Third Annual Educational Conference of the United Automobile-Aircraft-Agricultural Implement Workers of America in Cleveland, at the invitation of union officials. It expresses Mr. Bernays' belief that industrial relations would profit if labor unions carried out effective public relations policies and practices.

agement versus labor. We must safeguard ourselves against these internal dissensions, just as we are trying to safeguard ourselves against international war.

The most important of these struggles is between management and labor. Peace can be reached if we go after it intelligently. America can go forward only if the flow of goods and services continues uninterruptedly. Labor and management can plan and work together to realize the goals of our society. Legislation won't solve our problems—the answer is education in industrial relations. The public, the employer and the worker must know what it is all about.

Understanding Basic to Peace

Management, workers and the general public must understand the workings of our economic system. They must apply the new science of humanics. This science attempts to learn the cause of industrial conflict and to discover ways to cure the disease.

Labor should assume part of this educational responsibility. What can the educational directors of 920,000 UAW members do to lick this problem?

It is essentially a public relations problem. People must want cleanliness before they buy soap. They must want higher education before they swarm to the colleges. In the same way the public must want unions before they are willing to support specific union goals. A public that understands what unions have done for the good of the country is going to be more open-minded and friendly to union programs. If the public does not understand the value of unions, it may be guided by prejudice, untruths and distortions.

New ideas must be presented to the public in words they understand and accept. The term "real wages" means little, unless you know the difference between currency wages and purchasing power wages.

Let us examine your union's educational program and see whether it starts in at the foundation and builds up. You have several broad lines of effort.

First, you educate your members on your union objectives: to enter fully in the union's work; to develop effective and mature leadership for handling bargaining problems; to strengthen democracy within the organization; to build union solidarity. Through these

activities you try to reach your union's goals—higher real wages, industry-wide agreements, wage equalization, wage and contract policies, guaranteed annual wage, equality for women workers, and organizing the South through the CIO campaign.

Second, you try to strengthen democracy in a number of ways. You are fighting inflation. You encourage union activity in civic and political matters; in cooperation with farmers, consumers and others. You work for better housing, assistance to veterans, international relations, health programs and civil liberties.

The third part of your program is not announced but well understood—"selling" yourselves to your own rank and file. Research, advertising and public relations men in industry have the same problem. The client wants immediate visible results. To keep up his enthusiastic interest, you occasionally have to dramatize your activities.

As I study your educational program from the standpoint of public acceptance, it seems to me that you might undertake three additional programs of education to make all your publics understand what you want and why, and be more willing to accept your goals.

Three Additional Programs

I know that you have tried to do the three things I am suggesting to you, but perhaps not as part of a formal program which, to be effective, must be planned on a broad but detailed scale, over an extended period.

1. *Make the public understand the value to the country of sound unions and mature union leadership.*

2. *Make the employer understand the value of unions to him, and make him realize that he needs to apply the science of humanics. This will benefit employer, public and worker alike.*

3. *Make the worker understand our industrial system and his relationship to it.*

This type of education will lay the foundations for a broader understanding of the controversial issues and establish a base for greater cooperation between you and other sectors of our society.

Steps to Educate Public

Let me outline first what you might do to educate the public. There is acute need for such education. Authoritative polls again and again reveal large areas of ignorance on the subject of industrial relations. When the UAW was striking against General Motors a year ago, nearly one quarter of the people didn't know about it.

More than a quarter of the people didn't know the answer to this question in an Elmo Roper *Fortune* poll: "Suppose you had been acting as a referee in labor-management disputes during the past three months; do you think your decisions would probably have been more often in favor of Labor's side or more often in favor of Management's side?"

These are two examples out of many others of how wide-spread the ignorance is on labor relations.

The public receives its impressions of unions from newspaper headlines or radio broadcasts, usually just before, or in the heat of controversy. A union or management point of view expressed during controversy does not clarify; on the contrary it merely intensifies existing attitudes. People are more receptive to facts when there is no controversy raging.

The American public ought to have a great deal more factual information on union activity than it now has.

Limitations of Public Knowledge

Most people, I would say, do not know that unions have increased purchasing power and profits as well as wages, that they have been responsible for adjustments in our industrial system that have raised our standards of living. The public has little idea of what an extension of unionism might mean to our whole economy. They don't know what the advantages of unions are. What can be learned from the experience of other countries? Why do some unions engage in harmful practices and others not? How do unions work towards democratic control within their organizations?

Your 1944 CIO constitution says, in part, that your objectives are to find "means to establish peaceful relations with their employers" . . . "to protect and extend our democratic institutions and civil rights and liberties and thus to perpetuate the cherished tradition of our democracy." Americans will support your aims, if they have basic facts and understanding on which to base their judgments. They will not have these unless someone makes a planned campaign to provide them. The UAW and other progressive unions are in a position to do this. You can plan to cover the following kinds of information about unions.

Five Point Program on Public's Education Outlined

1. What is a union? How does it function? This campaign should give the basic story of union organization, its history and development; structure and

internal government of unions. It would tell about the different kinds of unions, industrial and craft; local, national and international; affiliated and unaffiliated. Explain clearly facts about size of unions, about jurisdiction, and internal structure; methods by which officers are chosen and their duties; membership dues, and disposition of union finances.

2. What are the educational and welfare activities of unions? Cover the story of the labor press and its function. Cover educational activities of unions such as vocational training, apprenticeship, labor banking, insurance and benefit programs, and the like.

3. What are the facts about collective bargaining? This should cover the whole picture; what the process actually is, how agreements are reached.

4. What are the facts about labor disputes in general? How do they arise? What are the mechanisms through which disputes are adjusted under union-employer agreements?

5. What do the words mean? No small part of this campaign would be to define many of the terms used commonly in labor-management discussions, but only vaguely understood by the public. A whole vocabulary needs explaining. Only a small percentage of the public knows the distinction of meanings among wages, wage awards, wage practices, wage differentials and wage stabilization, work load, work restriction and work sharing. Yet industrial peace depends on the public's understanding of these and words like check-off and closed shop.

About method — to do this job is simply to apply the techniques described in good books on mass education. Both the University of Minnesota and Princeton University presses have published bibliographies on the subject. It is basically important to educate the public.

Steps to Educate Employer

My second proposal is that you educate the employer on unions and on human relations. You can teach the employer what he should know about unions by the same methods you use to reach the public.

When it comes to human relations, more employers than is generally recognized are ready to adopt social responsibility for workers. According to a recent *Fortune* poll over ninety per cent of management thinks management should assume social responsibility beyond the sphere of profits, but a third of these stated that they think only one-fourth or less of management has social consciousness. In other words, management it-

self does not believe it has fulfilled its social responsibilities.

Industry must overhaul its thinking. Its use of physical science, of technology, has far outstripped its use of the science of social behavior — of how to work together.

Industry is not only a business, it's a social institution as well. Management requires skill in group and inter-group relations just as you in the UAW do. In the common interest you should help teach management how to work intelligently with labor.

Some difficulty in industry is caused by Victorian attitudes of certain employers who want to get back the hold on workers they feel they have lost through loyalty to unions. They resent and fear unions. They fail to educate their own people on how to work with people. Some do not understand that the worker, as Philip Murray put it so succinctly, is faced with "the primary human problem of earning a living." Many of these employers do not yet realize that the worker wants more than a job.

Americans Want Security

Elmo Roper showed, by authoritative polling some years ago, "that in the order of their importance to him, the average American wants a sense of security, an opportunity to advance, to be treated like a human being rather than as a number on the payroll, a sense of human dignity that comes from feeling that his work is useful to society as a whole." This was again confirmed by recent polls of his.

About half of the men, when asked the question, "if you had your choice which would you pick?" said they would pick a job that pays quite a low income but which they were sure of keeping.

About one quarter said they wanted a job which pays a good income but which they have a fifty-fifty chance of losing.

And fewer said they preferred a job which pays an extremely high income if you make the grade but in which you lose almost everything if you don't.

Disruptions in labor-management relations are caused by wage disputes, by economic insecurity, by real, or apparent, managerial unfairness in adjusting contractual relations, by harmful effects of assembly line work, and by work and pay scales planned on an individual instead of a group basis.

You educational directors of a great union can help reach your goals by carrying out the following educational program aimed at the employer.

Eight Point Program on Employer Education

1. Educate your employer to the place of the union in our system, educate him to study and use the knowledge of human relations that has been gathered by universities, labor unions, foundations.
2. Point out that many groups of progressive men and organizations are interested in studying and furthering human relations. These groups deserve support from businessmen and labor unions. I have in mind the Society for the Psychological Study of Social Issues, the Society for the Advancement of Management, the American Academy of Political and Social Science, and other groups.
3. Persuade them to stimulate further research by industrial relations schools like those at Cornell, Princeton and Harvard.
4. Encourage employers to carry on technological research to improve working conditions.
5. Help management to develop new approaches to the industrial relations problem. Stabilized employment, which some organizations have found enormously beneficial, is an example.
6. Point up the importance of intelligent, honest, unbiased industrial relations personnel.
7. Urge management to encourage responsible leadership among the unions.
8. Urge them to support housing programs, civil liberties, sound international relations and other programs to strengthen democracy.

When I speak of educational efforts aimed at management I know the idea is not new. You have tried it, sometimes with decidedly negative results.

Discount Disillusioning Experience

Your union has had disillusioning experiences trying to get management to consider your facts and point of view and you may feel that anyone who makes such suggestions is probably starry-eyed.

Your efforts cannot succeed over night because we have to overcome management's fear that if it allows labor to advise it labor will control it. Anyone who has carried on public education knows that responses are not mathematical. The displacement of one log can break up a log jam. The winning over of one man may win over others. You keep emphasizing an idea to a group or to individuals and nothing appears to happen. Then, suddenly, some one attitude or action will change the whole picture.

The educational process builds new points of view

by planned continuous and repeated efforts. Different times, conditions and methods yield different results.

Employees can educate employers in human relations by the skilful use of the spoken and printed word.

There are innumerable ways of reaching the attention of employers. You can arrange for speaking engagements before employer groups, trade associations, chambers of commerce, boards of trade and allied groups, like the Lions and Rotary Clubs.

Radio talks and speeches at public meetings will carry your message.

You can educate people by word of mouth in conversation. A thought clearly expressed has a way of starting a chain reaction.

You can send clear factual information to reach employers by the printed word — stories in newspapers and other publications, advertisements, pamphlets and broadsides — through all the media generally used in adult education.

I assure you that intelligently written letters addressed to top management will be read; that talks by union executives to community groups reported in the newspapers will get attention; that material prepared for special groups in the community, such as women's clubs, lawyers, clergy will indirectly affect businessmen.

You can enlist the support of colleges, foundations, progressive employers, consumer and other groups to carry your program forward. Workers have a duty to the common good to help educate one of the most potent groups in America — management.

Steps to Educate Worker

The third activity I propose is to educate your union members in economics. Reliable polls prove we need this education.

Recent surveys of cross-sections of factory workers by the magazine *Factory Management* show that more than half the workers queried had no opinion as to which top union leader is the most effective in getting better wages, hours and working conditions. About one-third had no opinion on whether the prices a company charges for its products are too high, not high enough, or about right. About one-third had no opinion on their bosses' pay. About half had no opinion on whether the owners' and stockholders' dividends were too high or too low.

Most of us know little about technical finance in business. This leaves the worker without the knowledge on which bargaining must be based. If he understands management's problems he can deal with man-

agement on a realistic basis. Some well-informed unions have come to the aid of management when it was in financial difficulties, as Amalgamated has done, because they knew that such assistance directly benefitted everyone dependent on the particular industry.

Naturally you will ask how you can carry on this activity on local levels with limited funds and personnel. Fortunately, you can use additional ideas without adding to costs. You are not dealing with machinery. You are simply adding themes to those you already use.

If you want help or criticism of your programs, it would be a good idea to discuss them with men who head industrial or public relations programs in universities. They will check the effectiveness of your educational program.

Many groups are trying to give so-called economic education to the worker. Some groups are sound and sincere. Others have an axe to grind for themselves or someone else. Most of them are biased and are

looked on with suspicion by the worker. An effective workers' educational program is vital.

Management and labor must understand their mutual problems if they are to work together effectively and prevent clashes.

Peace follows industrial battle as peace follows war. Mediation, conciliation, voluntary or compulsory arbitration come after strike or lock-out. Through planned education of the groups of our society we can achieve agreement and cooperation and avoid battle. We must try to engineer the consent of all to our common goals. Our system cannot stand continuous warfare.

Walter Reuther has said, "the test of democratic trade unionism in a democratic society must be its willingness to lead the fight for the welfare of the whole community." Management has the same obligation.

These three programs should provide the firm ground on which to build for your specific goals.

How Well Can Management Predict?

An Examination of Prognostic Research, its Utility and Limitations

By WILLIAM A. HAMOR

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PREDICTIONS are commonly made in every area of professional and business life. Based thereon, measures are taken in advance to secure immunity from hazards. In industrial management budgets and schedules are prefigured and every step in planning or every advancement in rank of personnel is in a real sense a prediction. In fact, every managerial decision involves some prediction; the executive must continually size up human beings and human situations. Retirement income for employees and understudying in key positions are familiar provisions in managemental preparation for the time to come. The principal function of sound regulations is to insure predictability of behavior within an organization. By such rules workers are enabled to see in advance possibilities for their future.

Foretelling in Various Activities

Interspersed in all human activities is foretelling, the practice of relating beforehand. Prediction has like meaning but it is a more forcible term implying precision of calculation or knowledge. Both assumption and inference impress the diverse auguries of aesthetics, athletics and politics. The political phrase "manifest destiny" refers to a future event regarded as inevitable. Prognostication foreshows by studying signs or symptoms and both meteorologists and physicians prognosticate. Weather forecasting is indeed a well-known instance of prescience. Thalassographers can foresee the times of high and low tide by means of mechanical contrivances. Astronomy has carried quantitative foresight to a far extent. Strategy, logistics and tactics in warfare are surcharged with predictive traits. In atomic energy research entities are dealt with that are so small as to be beyond the realm of ordinary comprehension, yet nuclear scientists can make predictions that are weighty in their purport.

Today, in industrial management, forethought means provident selection and care of workers, work, and works; and scientific investigation should be precedent to all the substantial forecasting and foreshaping in regard to general administration, personnel, production

and sales. Managemental prediction should always be warranted by what is known.

Prevision and Knowledge

The aim of science is to interpret phenomena and as far as possible to control them, as is well shown in physics, chemistry and biology. Exact science has the power of quantitative prevision and by research action can be molded so as to prepare for decisions. This scientific research enables a deliberate estimate of what the future holds, the adjustment of performance to future problems, to distant emergencies. Implied always in the use of this research are the comprehension of ideas dependent on the reasoning process, study with full consciousness of the purpose, the expression of data in terms corresponding with realities.

So-called instinctive knowledge is only of cursory interest in scientific research. Cultural patterns are ready-made mental tools, customarily translated into individual habit patterns in persons, that enable responses to stereotyped situations; by them there cannot be met flexibly all the fluid complexities of life in a changing civilization now and tomorrow. Intuitive impressions, such as hunches, are naturally touched upon; but where there is enlightening introspective intuition its conclusions or inferences must be assessed by science. Intuitive capacity merits cultivation, but it is well to beware of emotional intuition and of intuition derived from inadequate experience. Presentiments may seem at times to haunt the shadowy purlieus of imagination, but they differ in substance from products of keenness of insight, whose essence is intellectual discernment or acuteness of discriminative judgment.

In scientific research indications of future events require deduction of effect from the critical study of causes. Professional acumen may enable a scientist to previse quickly the ultimate solution of a difficult problem, but it may take years for him to furnish the proof, to recognize the result as a truth in the circle of his knowledge. Prevision may be vain, quixotic or erroneous and is not factual until experiment has verified it. There is no new scientific knowledge without

investigation and no investigation without prediction. The history of science demonstrates that it is to the worker that inspiration comes, that new ideas evolve from old ideas, that futurition is the sequence of research. The periodic table of the chemical elements exemplifies these values impressively. If young scientists would pursue the right path, they should learn about the lives and discoveries of the masters; they should get to know by what exact deductions, by what audacious inductions the great edifice of science has been constructed. In that building are the soul, the sentiment, the thought, the expression, the predictiveness inspiring the research that is constantly revising and increasing the conclusions of science. There are no fixity and no finality in this fertile field.

Prognosis in Education and Management

For some years we have been studying the general criteria—the definite levels of scholarship and favorable personal qualities—that can be used to indicate success in courses requisite for careers in industrial management as well as scientific research. We have also investigated instruments of prognosis that have been developed to point out specific professional aptitudes, as, for example, tests with scores that bear important relationship to successful attainment in various professional schools. This study has brought us close to the critical score and other prognostic techniques employed in the educational domain. As a scientific procedure in education, prognosis embraces the prediction of future requirements from accurate records of clearly defined behavior. Essential in such prognosis is the factuality of the predictive value of proposed measures. Several professional groups, engineering included, are now at work in developing tests for the selection and guidance of prospective students. It is hoped that, by utilizing psychological and psychiatric guidance, attention to the subject will yield useful new knowledge.

Among the contributions of research on prognosis in education are: analytical and statistical techniques—such as an index for forecasting efficiency, prediction tables contrived with the aid of standard errors of measurements, and tools for computing growth—methods for observing human characteristics, such as intelligence tests, interest scales, and mechanical and motorability tests; and means of grouping measures statistically by way of the clinical approach and in terms of patterns of ability. In general, the test making has aimed to fit conditions to purpose. These investigational procedures and results, reported in such periodicals as *Educational Research Bulletin*, *Journal of Educational Research* and *Journal of Experimental Education*, are of more than passing interest to personnel management specialists in industry. For such findings to be meaningful, however, they should be related to life-history data on the individuals tested.

Education and industrial management should have complementary as well as co-operative roles. Educationists might improve school administration by learning more about the philosophy and principles of industrial management, and votaries of management might derive benefit from advances in education that pertain to administrative planning, to personnel supervision and welfare, and to public relations. In particular, industrial management might profit by studying forms of prognostic research applied in education. With more appreciation of the value of the social sciences, management will realize more extensively the usefulness of prognosis and will encourage its scientific development. Research done so far on techniques for the diagnosis and prognosis of conduct is encouraging. Many professional societies have used research to advantage in formulating policies and in administering programs, and in the future the application of such investigation will undoubtedly be expanded.

The General Nature and Scope of Prognostic Research

Prognostic research, or formal scientific prediction, should illuminate the executive effort that consciously plans to effect progress in the industries and in their human relations. The future operations of variables in the realms of the natural and social sciences can be pointed out by such research, which investigates generalizations derived from historical and experimental study so as to estimate their predictive value.

In prognostic research it is necessary to analyze critically all that is known respecting the operation of pertinent variables as gleaned in a review of existing information and then to examine their action comprehensively in the specific problem so as to acquire a clear view of the drifts of facts or relationships for use in reasoning about their continuance into the future.

The historical trend alone may at times reveal what is best to do in planning. It is disclosed by the method of genetic explanation, which traces the relevant history and makes possible the description of origin and development. In the application of this method there is assumption and not investigation of the validity of generalizations. It is essential wherever pos-

sible to study the factors of pertinence over a continuation period sufficient to uncover the most probable nature and tenor of their future occurrence—in other words, experimental research with its controlled observation of change and development should be pursued. And if this experimentation is in the domain of generalization already of scientific value, as is usually the case in industrial management, the prediction should be the best securable guide for executive action.

In the employment of this natural science approach, which brings the highest attainable degree of certainty to prognostic research, consideration is accorded to the inherent general value of phenomena, but the use of the procedure also enables an adjustment of conditions to the objective. By its adequate use steering principles can be deduced and by the degree of their permanence the accuracy of prognosis can be evaluated. Human activities proceed according to natural and social laws, motivated and directed by accepted attitudes and philosophies. The experimental method can divulge the probability that, under similar conditions, events will occur later on.

Techniques of Prognostic Research

The techniques of prognostic research, all of which need improvement, include full enough description for exposing trends, graphic representation for picturing drifts of facts, and correlation after tracing relationships. Insofar as statistical analyses and correlational procedures present descriptive facts, their utility is certain. The look onward must not be vague for prediction must be useful. The effects of contingency, irregularity and spontaneity are essentially unpredictable. Value in prognostic research depends upon the expanse and thoroughness of the work and the reliability of the devices and data employed. As has been mentioned, to insure as much certainty as possible, systematic experiments should be planned and carried out if they can be conducted. The usual goals of experimentation are the determination of the direction of present tendencies of facts or relationships and the discernment of the lines of influence into the future in the light of real prediction. According to this natural science approach, the problem must be defined, variables must be recognized and controlled, a sufficient and dependable measurement program must be followed, and the data must be classifiable and interpretable.

Many prognostic researches have been recorded in sociological, psychological, economic and management literature. Cultural changes, regional planning, person-

ality and conduct, marriage, success in various vocations, improvement with experience, relations between knowledge and action, predictive values of measures of ability, actuarial practice, national income, commodity yield and price forecasting—these are some of the areas that have been explored. In industrial management prognostic research is important in plant location, in process and product development and diversification, in distribution, in market cultivation, in labor relations, and in building strong organizational social structure. In personnel management there is prediction based on correlation, which is a statistical tool used in the appraisal of selective devices. Scientific investigation has shown that employers can profit by applying tests of intelligence, clerical capacity and mechanical adroitness in the selection of personnel. Properly used, test ratings and objectified self-appraisals enhance the accuracy of prediction of successful performance at all levels. Opinion surveying organizations that utilize sound principles have fine records of prediction in connection with matters affecting employee morale. In sampling public opinion, a well known method is the quota system used in forecasting elections, in gauging popular views, in making market surveys. Opinion measurement itself is moving into the area of causes and depths of attitudes.

Economic Forecasting

Such natural sciences as astronomy, physics and chemistry constantly make precise predictions. Among the social sciences, economics is nearing a stage where its experts expect to be able to forecast rather accurately within limits, as explained in published studies of cycles. If research can reveal the causes underlying the various rhythmic phenomena, it is possible that cyclical periods may be controlled to economic advantage.

A number of agencies provide service in business barometrics, using statistics to predict commercial conditions as well as tendencies in commodity prices. Economic predictions are products of acquired data, approximations in point of fact—the probabilities of tomorrow—and throughout the province of finance their possibilities are appreciated. Unreliable financial prophecies of the past, however, demonstrate the essentiality of maintaining protection against unpredictable eventualities in conservative investment programs. As in all prognostic research, in laying down the steps for procuring sufficient and determinate information the prospectus of a farsighted economic program projects

forethoughtfulness of all available data of pertinence, not excluding foregone conclusions and guesswork of specialists. Cicero, who was a statesman and not an economist, once remarked rather wisely: "I shall always consider the best guesser the best prophet."

In the history of economics, as the scope of economic statistics expanded and the irregularity of successive business cycles became plain, more and more heed was given to sequences and many studies were made of repetitive leads or lags among various activities. It has been pointed out by the National Bureau of Economic Research that most forecasting devices have occasionally proved successful, but that no method has afforded, for any lengthy period, consistently good predictions of changes in business. Let us hope the widespread work on American economic development will add new knowledge on anticipating trends.

The use of foretokens seems to be a way of all human life, of correct living itself. There does not indeed appear to be a choice anywhere of whether to submit to forecasting or to refrain. There is rather the question of whether expectations can be based on more or less refined analyses of experience or on procedures followed in natural science. It is recognized generally, however, that prognostic researchers in a team, such as can be maintained in an institution, can always look back and forth in history and science much more methodically and effectively than lone workers. It has been shown often that pooled analysis and judgment as well as audience testing are processes that can be applied valuably in advance of conclusion in all important prognostic work to reconcile various viewpoints.

Prognostic Research in Building Construction

Both science and art provide ways of finding and enjoying beauty as well as utility. They are so applied in sculpture, cinematography, architecture, engineering and community planning. In these fields, in major assignments, prognostic research aims to evolve prototypes or models, detailed patterns of things to be created, representations in miniature of the parts, proportions and features to be studied, improved and finally copied in the complete production. Several examples from our experience in pre-design should supply helpful illustrations.

Prior to the construction of a new and beautiful stone building for housing the scientific researches of Mellon Institute, the architectural design of the exterior was perfected by methods that involved three different models besides numerous alterations and

artistic and engineering refinements at each stage. There was first made a model of the entire big building to a scale of $5/32$ inch to 1 foot. Then, after study and many changes in details, a larger model of a portion of the building was constructed to a scale of $3/4$ inch to 1 foot. And subsequently it was thought best to erect in the nearby country a full-size model in stucco of a corner and two columns of the front of the edifice. This model, which was about 90 feet high and 40 feet long and included a large grille, enabled the determination of the most appropriate adornment of the exterior of the building. Definite improvements in form and ornament of the columns and entablature were accomplished in this manner.

Similar caution and certainty, through experimental study and practical trial, guided the solution of problems encountered in the construction of the interior of the building and especially of the laboratory rooms. To facilitate dependable results in this planning, there was erected a temporary one-story structure, 45 feet \times 50 feet, in which two different size laboratories, fully equipped, were built, and in which various materials and devices were put to test, so as to induce the preferential responses of research workers. This proving house made it comparatively easy to get early answers to constructional questions regarding walls, floors, hoods, tables, plumbing, ventilation, electrical layout and illumination.

A searching study of artistically significant emblems, ancient and modern, brought the most fitting interior ornamentation. For this reason all decorative features of the building are symbolically correct. The study facilitated decisions respecting sculpture, wood carving, decoration of ceilings, and embellishment of floors, walls and elevators.

Prognostic Research in Manufacturing

A principal characteristic of industrial management is to be experimentally minded. In basic investigational and developmental programs for technology, new process evolution has five stages, namely: (1) laboratory, (2) microplant, (3) large-size unit, (4) sub-commercial plant and (5) industrial factory or macro-plant. Sometimes stages (3) and (4) are combined wholly or in part. In stage (2), wherein operating variables are studied, the model is rendered both simple and flexible. In stage (3) the elementary design is attained. In stage (4) there is simulated the full-size practice in everything except capacity; in it efficiency is determined. This procedure makes the future of a

process present to management. The future is thus the aim of both engineering design and engineering economics. In fact, prediction based on exact science underlies all engineering.

Pilot or unit plants have been operated extensively during the past thirty-five years to develop processes worked out in laboratories—to overcome teething troubles to which all infant processes are liable. They have been found to be essential in choosing constructional materials and apparatus, in devising new types of equipment and proving their worth, in defining and evaluating processing practice, in training personnel, in acquiring economic data, in revealing dangers, in establishing the permanence value of results. They contribute most importantly to obtaining answers to questions of commercial feasibility regarding the costs of manufacturing and actual or potential markets for new or improved products. With unit-plant samples and data available, an investigation of possible outlets for the products can be conducted systematically before entering commercial production. The success of this practice, now in wide use, is illustrated in the great growth of technochemical synthesis.

When a process is transmuted from the laboratory to a unit plant, attention must be attached to developmental costs and much caution must be taken. Market research can make a profitable development more certain by securing data on desire for the product, the responses of consumers, the price range to be met, the broad future outlook. In industry, it is necessary to forecast demands and prices for established products in order to assure sound planning regarding production schedules and plant expansion. It is also necessary to find and to cultivate uses and markets for new as well as old products, if the sales for new products are to be predicted.

Industrial management must constantly peer into probabilities, must know what the future holds for its organization and its products. That is the purpose of company and industry outlook surveys prepared by prognostic researchers to guide purchasing, sales, distribution and production forecasting. In this work economic and social trends, industrial, public and professional relations, and technological changes are studied searchingly, and unpredictable factors are separated.

The Need for Apposite Social Science Research

There is a sector of unpredictableness in every branch of human relations. The complexities of the personalities in any group, the presence of competi-

tion, and the transitory and variable effects of various attempts to control attitudes and actions by the use of suggestion make this inevitably true. The persons whom promotional specialists endeavor to persuade are not inmates of a psychological laboratory: they cannot be made ready mentally by artifice to have uniform perception. Instead, these persons do not behave in ways they have not learned; they constitute an aggregate in a complicated social environment in which they are subjected to the influences of society *per se* and of various kinds of opinion manipulators employed by competing organizations.

All social occurrences are reflected in the behavior of human beings. They also have characteristics that transcend individual behavior. These characteristics are those societal products labeled culture—the common or typical patterns of behavior that are passed on from generation to generation and exert tremendous coercion over the thoughts and actions of individuals. Psychology reduces the extent of unpredictability through contributing to our knowledge of human minds, through systematic observation. Sociology is yielding greater and greater knowledge of the dependably typical behavior and thought patterns of social groups and of society at large through such methodical procedures as opinion surveys and consumer and employee tests.

Relationship Between Social System and Industry

Profound changes have been wrought in the American social system by the great development of technology. On the other hand, American industries have become strong, big and diverse by being a part of that system. This growth has been nurtured predominantly by initiative and technical skill in industrial management, especially through research in the industrially applicable natural sciences. But while our social system and our industries have interdependence and mutual influence, much more knowledge respecting their relations is called for. And such knowledge should be acquired through investigational work in the pertinent social sciences. Sociology has already gained insights into human life that explain many facets of why human beings act as they do. Industrial management, however, needs to discover the full potentialities of this undernourished field. For instance, two groups should have an equal interest in foods, namely, the producers or processors (for industrial endurance) and the consumers (for human endurance). And of course research attention should be given to the differences in

the dimensions of the patterns of human relations in the manufacturing and servicing spheres of the industries. Success in the general range of service is no doubt measurable by the completeness of industrial adjustment to the behavior of customers, as has been found in the realm of the restaurant.

Industrial management should have an accurate knowledge of behavior at the consumer level as well as at the worker level. By systematic studies of the state of consumer opinion, companies could gauge their marketing effectiveness, chart new efforts, make revisions in policies. Societal response and cooperation should never be left to chance. The social geography of communities could well be plotted so as to show networks of relationships useful in predicting channels in which interpersonal communications would likely flow. Research on all human problems must have human methodology and must yield human data for the results to be of human significance. Labor market phenomena, for example, can be adequately comprehended only against a setting of knowledge of the action behavior of all the factors concerned. In seeking a practical basis of forecasting in the province of social behavior, studies must be made of the ranges within which future human behavior will probably occur up to the limits of scientific possibilities.

A prediction is appropriate in closing. In the industrial research of the future, less and less attention will be directed to adaptations of products from the standpoints of their manufacturers, and more and more attention will be devoted to functions of products from the viewpoints of consumers or customers. These products will be regarded as carriers of social value. There will probably be more casualties among old products, more replacements by new products, more opportunities for the application of scientific ability. Reactions of consumers, conducive to good relations with them, will be derived more from their direct perception and knowledge and less from inference and persuasion.

Summary

Prevision of value to industrial management demands scientific and improving prognostic research to unveil conclusive evidence for guiding decision-making and to avoid surmise and conjecture. This research should be made actual in both the external and the internal human relations of the industries.

No tests of industrial well-being can be named which are as final as those concerned with the well-wishing of both consumers and employees.

A Dynamic Approach to Management

Increased Production Through Improved Human Relations

By EVELYN BUCKLEY

Consultant in Management and Human Relations

SCIENTIFIC MANAGEMENT means the operation of a business or other organization through the use of tested knowledge instead of guesswork. This requires continuous research, for it is the paradox of the scientific method that it no sooner succeeds in solving a problem than it opens up new ones. It requires, also, a high level of integration of the results of such research for the achievement of the over-all objective.

Until recently, most research for management had to do with the physical aspects of production and drew heavily on the physical sciences, primarily engineering. Although Frederick W. Taylor himself envisioned a wider range, many who succeeded him were not able to see the great implications in the mental revolution which he insisted was necessary if management was to be more than merely systematic — if it was to be truly scientific.

Open Mind Needed

This mental revolution implied that management must not only undertake scientific research, use the results of scientific investigations, and adopt new methods, but it must also be ready and willing to forego familiar concepts, to adopt an open mind toward new situations. Acceptance of this point of view and willingness to carry it through to its ultimate conclusions requires breadth of vision and flexibility. It is no wonder, therefore, that for a long time after Taylor's death many of those who exploited what came to be known as Scientific Management contented themselves with certain popular, specific techniques having to do with production planning, scheduling and control, plant layout, arrangement of the unit work place, time studies, motion studies, the establishment of standards of cost and of units of work, wage rates etc. The catchword was efficiency. The philosophy and inclusiveness of the truly scientific approach were frequently obscured.

Valuable gains came as a direct result of the increased productivity deriving from this work. But the problems increased in proportion to the failure to undertake the logical extensions of such studies and to relate them in ever-widening fields of application. For in addition to applying the scientific method to the various

internal phases of a particular organization, management must also co-ordinate the results thus obtained and fit the business into a larger picture. This wider scope includes the social-economic scene within which the organization operates.

Integrating Engineering and Social Sciences

While most management principles and tools originally derived from the sciences of engineering — mechanical, chemical, electrical, structural — there evolved the need to integrate this knowledge with the social sciences — economics, medicine, psychology, indeed even anthropology, sociology and social psychology. As one illustration of this, take for instance the observations from the field of psychosomatic medicine* that the "live stock" health of the world is steadily improving but its population is failing to produce. In spite of the falling death rate, the great expectation of life, the increasing height and weight of school children, the rate of incapacitating sickness in the working population is steadily rising.

The illnesses contributing to this rise are comprised almost entirely of psychoneuroses and psychosomatic disorders. This is due to a decline in the psychological health of the community as evidenced in increasing absenteeism, increasing fall of output per work period, and the increase in unofficial strikes. This social sickness, which gives rise to physical and nervous ill health, is the result of the too rapid or too intensive breakdown of established social patterns in conditions that do not permit the ready formation of new, re-integrating social patterns. A first step toward solving this problem which so directly affects production is to change men's attitudes of dependence and independence to attitudes of interdependence.

Obviously industrial management cannot do this job alone. It is part of the larger social problem involving the family, social groups, the church, schools, the community etc. But, if one stops to realize that the average worker spends the greater part of his waking life at work, and if one also realizes what an imprint on the

* As reported in *The New York Times*, Sunday, May 25, 1947, from an address by Dr. James L. Halliday, a pioneer in psychosomatic medicine and one of Great Britain's outstanding psychiatrists, before the Silver Hill Foundation.

total environment the incidence of mass congregation of workers has made, the tremendous role to be played by management in effecting a change for the better is at once apparent.

Management's Responsibility

Management, therefore, has a real responsibility, first, to be aware of the nature and prevalence of these nervous and psychosomatic disorders, and, second, to study the physical and social environment of the shop, office, and indeed of the total industrial civilization, to make way for conditions which bring about attitudes of interdependence and social health.

At this point some managers may argue that there are few cases of "insanity" in their plants. But the point does not involve outright hospital cases; reference is rather to those numerous borderline situations which statistics concerning alcoholism, stomach disorders, and heart conditions — the more obvious types of psychosomatic diseases — prove to be on the increase.

Management has, of course, come to realize that the phase of its business called the personnel job has more implications than ever before. But it has tended to approach such problems through mechanistic and legalistic means; it has not taken advantage of the increasing knowledge concerning why people behave as they do. Yet we have at our disposal the results of many studies and researches which, if properly integrated administratively, can go far toward changing this situation of unconscious strikes and slow-downs. The full use of this scientific knowledge needs, perforce, a stimulation of the revolution — or perhaps an extension of the evolution — in the mental attitude of management which Taylor fore-saw. That some managements have made striking advances in this direction testifies to the possibilities open to others.

Human Being Neglected

Most of the early scientific managers, except in spotty instances, neglected the human being in their studies. True, the physical, motor activities of workers were studied and restudied. The motions of their hands, arms, bodies, legs, feet etc. were observed with stop watches and micro-motion films. Their desire to excel and their energy were crudely stimulated through incentive systems (primarily financial) and their great reservoir of inspiration, ideas and interest was tapped by means of suggestion systems. These were mostly of a routine form, suggestion-box, committee type of procedure which syphoned off at best merely the surface content.

The real person that the worker is — the human

being — was on the whole neglected. The returns in increased productivity from mechanical and procedural improvements were so startling that many failed to note the great loss to productivity through lack of involvement of the whole person in the work situation. That is not to say that management did not recognize that something was wrong. Indeed the literature of recent years testifies to its great concern with the "human problem" and with "human relations." But the fault was thought to lie primarily with the workers — as individuals and as organized groups. The problem was approached with the idea that the man on the working side of the fence was some kind of a man apart with a queer perversity which caused him to say "no" every time. The worker, or labor, was something to be "dealt with" or "handled." Management failed to understand in most instances that it was itself also involved in equal human terms. Instead of attempting to bring about a situation of balance and interdependence, many responsible executives attempted to solve the "problem" by exhortations, threats, public relations or advertising extolling the American way of life, legal action, or by paternalistic programs of welfare and recreation through which it was hoped workers might be rehabilitated, or at least brought peaceably into line. Management on the whole has not taken advantage of the tested knowledge resulting from numerous researches in the field of human relationships which, taken together, supply the manager of today with the opportunity for a new approach toward solving this problem.

Abuses of Social Knowledge

Unfortunately, however, when some managers have hit upon one or another isolated bit of knowledge in this direction, they have taken advantage of it in the same narrowly procedural, restrictive sense in which they utilized the scientific work of Frederick W. Taylor. That they were forced in many instances to do this is not always to their discredit, for industry has been faced with the exigencies of immediate situations from depression to war with scarcely time to catch its breath. Thus many companies will point with pride to their Psychological Testing Program, to their Induction and Training Program, to their Counseling Service, Grievance Procedure, Welfare or Safety Program — each and all the result of fine, carefully worked out and separately correct personnel principles brought to bear to fill some obvious need.

Few managements have synthesized these to create an environment within which the workers and the managers can achieve a mutual and dynamic equilibrium,

with its by-products of mental and emotional health — an environment in which the natural forces, the energies and the interest of the workers are released to supplement and enhance the mechanical forces of production. Practical managers, seeking to avail themselves of better knowledge have sometimes been misled by some of the numerous personnel specialists who claim that in their own specialty lies all the answers. This has resulted in confusion for many an administrator who has attempted to "shop" and pick and choose from among these special techniques those which will be of the greatest immediate and practical value in his own company.

One finds that some organizations are hiring at the same time specialists in training, in job evaluation and in work simplification, each of whom, in order to do a good job in his own specialty has to undertake, for instance, job analysis. Many times these specialists stumble over each other and work at cross purposes — with the best intentions in the world — while the management blithely assumes it is buying the best and latest scientific techniques and programs. Many of the specialists themselves know better but they are unable to "sell" an overall program because a special technique has gained popularity and is in demand. And some of these specialized programs, like psychological testing, for instance, when not properly integrated with other correct procedures into a balanced relationship for total management can be harmful — both to the workers and to the company.

That the management frequently fails to make the necessary synthesis for itself is due partly to the education and training which many of our managers have received. Many in top management positions come up from some specialty, from one department of the business — production or sales or finance — and have had little or no training in the Gestalt approach. They do not see things in wholes, with the several technical specialties in proper relationship. They are used to attacking their problems during the crisis situation and at the point of eruption. The result has been a patchwork of corrective procedures and systems rather than the creation of a dynamic working environment.

Need for General Administrators

That the engineering and business schools of today are giving attention to the "economics" of engineering and to the "humanics" is a hopeful sign. There remains, still, a crying need for the training of more "generalists" who will know how to use properly and effectively the work of many specialists. Such administrators will have more skill in relating specific and specialized techniques and knowledge to the total situation and will recognize

in their planning and operating that when forces — both physical and psychological — are generated or shifted in any one area the change will have an effect on the total field of which it is a part. And they will be forever conscious of their role in creating the total environment within which various individuals gain their experience, develop their personalities and carry on their special skills. The shift is from mere individual efficiency toward total effectiveness.

New Knowledge and Skill Required

But what is some of the knowledge and what are the skills required by the present-day manager if he is to take advantage of the scientific facts resulting from recent research and develop the necessary synthesis?

Certainly a basic requirement for the achievement of managerial goals is knowledge of the needs, desires and motivations of human beings. Practical managers should know the effects on the human ego of both impelling and restrictive forces. For it is pertinent for management's understanding of the interplay of forces in the industrial human relations situation to recognize how the various individuals concerned are reacting and why they are reacting that way.

What constitutes basic human nature and how this interacts with the environment are matters to consider when making managerial decisions. The manager most assuredly wants to know more about the effect on the workers and on himself of the environment which business and industry are creating. Executives should come to understand that aggressive behavior is frequently the result of repeated or violent frustrations. The studies of the social psychologists tend to emphasize the conclusion that aggression is neither an organic trait nor a biological heritage. It is a "learned" characteristic developed through the interplay of social forces. The anthropologists can point to societies in which aggressive behavior is lacking. Other traits or "characteristics" commonly misunderstood to be a part of raw human nature have been shown to be environmental developments. Thus the manager should also know about the processes of human growth and about the laws of learning. Knowledge of the significance of emotion in the learning process has value for general managers as well as for those who are primarily concerned with industrial training and orientation.

Indeed, the part that emotion plays in all human relationships needs greater understanding and more sensitive acceptance on the part of management. Too many changes or "improvements" in organization or procedures have been made and presented to the workers as

a *fait accompli* in the coldly "logical" sense. That it was a change for the better or an improved procedure in the eyes of the management should, it has seemed to the executives, be sufficient reason for its acceptance by the workers. But unfortunately man is a nonlogical and at times irrational being. Acceptance implies more than logical, intellectual, cerebral activity; it is rather tied up with the psychic being. If the worker has had a part in developing the changes, if in some way the changes are his, he will be more inclined to accept them.

Through lack of understanding of this urge toward participation in those things that affect us, many a well-meaning manager has been bewildered by the lack of "co-operation" or gratitude he has received when he has "given" something to his workers. A new cafeteria, improved rest room, even a representation program or an increase in rates, while desirable and "wanted" things in themselves, may be coldly received if the management decided and went ahead with all the plans without any consultation with the workers. Studies by educators show that even adolescent children progress and achieve better when they have had a chance to participate in the planning and control of their activities.

Active Participation

Educators also have pointed out as a result of their studies on the development of character that people learn primarily through taking part in actual situations. There is proof to be had of the effectiveness of actual motor and emotional involvement in the learning situation. The results of many studies conclude that active response on the part of the learner is 100 percent more effective than passive absorption! The learning of precepts of honesty, for instance, in Sunday School does not result in making honest persons of those who participate in dishonest practices in the home, at school or at work. The office boy picks up the ethics of the boss. This point has importance for the understanding of the aggressive, and even of the "racketeering" labor leader, for many of them may have learned their mode of behavior right in the shop situation. On the other hand, group training procedures which have been successful in developing new, positive and socially constructive attitudes have been studied and developed and are available for management's use.

The administrator today must be aware of what methods he is using in dealing with his workers. The American worker, though probably unable to give an accurate definition of our "democratic way," increasingly feels resentment at the impact of the autocratic

way often unwittingly imposed by management. The American manager, on the other hand, while probably able to give a definition, frequently could not spell out in detail all the procedures and the subtle psychological interrelationships involved. Even more important, he could not point to a background of experience and education which trained him, personally, to operate democratically.

One has only to sit in on conferences of unions and managers, or listen to the United Nations debates, or attend school board meetings, to recognize how little knowledge and skill most human beings as yet have in the processes of integration and in the minimizing of differences. The creation of a psychological atmosphere within which it is possible to make the fullest practical utilization of varying points of view is a high managerial skill. Actual information concerning democratic techniques must be learned, understood and intelligently applied by management. We have available the results of studies which point out the positive values of democratic leadership techniques over authoritarian and laissez-faire conditions. And we have also developed methods for the retraining of supervisors and executives in democratic attitudes and the practice of democratic leadership skills.

Effect of Participation on Production

The theory of participation, discussed above in connection with the learning process, has significance for management directly applicable to production. In many experiments it has been shown that there is a healthful release of energy and interest resulting from active engagement on the part of the worker in determining conditions or standards of work. This is in sharp contrast with the meagre results frequently achieved when workers are merely "told" what to do or "given" advice or suggestions. Many studies indicate that the worker must become more than merely "task-involved"; he should become also "ego-involved" in his work. When a man's ego is not effectively engaged, the individual becomes restive and reactive. Subconscious urges to protest find outlets in complaints and strikes. Even a carefully thought out grievance procedure is not going to dispel this cause of trouble. In such a situation the worker is ripe for a demagogue to focus and exploit this energy which might also be used in a productively worthwhile situation. The devil makes work for the idle non-participating ego.

Managers need more awareness that the urge toward selfhood is part of the essential of humanity. This urge

The will find expression. If it is denied in the normal working situation it will break out elsewhere. Many a worker finds in his union, for instance, the opportunity for self-expression, for "consciousness of self" which is denied him on the job. The "you-are-not-being-paid-to-think" attitude of many a foreman is contrasted with the welcoming of ideas and suggestions in the union hall.

Recent studies also point to the need for experiences of success. The feeling of accomplishment and achievement of goals at intervals along the road are vital to the emotional health of the worker. This implies establishing goals that are possible of attainment and giving aid in achieving the skills necessary to attain them.

Managers should have more knowledge of the deep-lying effects of reward and punishment on workers' egos and the fact that resort to threat of punishment or promise of reward to support a command or prohibition is expressive of the fact that the command or prohibition is not justified. An analysis of the psychological implications of reward and punishment will give pause to those who have to do with incentive systems.

The part that fear plays in people's lives has been amply verified by the psychoanalysts. The threat of punishment always and necessarily gives rise to the structure of a constrained situation. To relate this fact to the industrial situation it is necessary to recognize that at every point within his sphere of action the worker is internally controlled by his fear of economic depression, unemployment, starvation.

Executives and supervisors must also realize that the specific detailed job has a relationship with some whole which attracts or repels the worker as something valuable or worthless. There is sufficient psychological evidence concerning the nature of wholes in the behavior of human beings, and in their needs, to support the hypothesis for industry that a positive response toward work can be developed even for unpleasant tasks if they are made part of a larger meaningful activity.

This was amply demonstrated during the war when the worker engaged in assembling a rather uninteresting and uninspiring small gadget attained high enthusiasm for this work after being shown films of the tank or plane of which his gadget was a part. The fact that his part could not be specifically identified for security reasons did not lessen the force of identification with the end product because he believed in its purpose. He became identified with the larger worthwhile activity and his part had meaning and value.

Relation of Individual to Group

The operating executive can also draw on greater

knowledge of the relationship of the individual to his group. The worker has need for the respect of his fellow man, just as the scientist or professional worker does, and his status within his group cannot be altered artificially by management without disrupting the equilibrium of the work situation.

Industrial studies point to the great values to be derived from therapeutic counseling. Without going as deep as psychoanalysis, skilful counseling can help workers to gain a release of repressed emotions and give vent to ideas and feelings which cause them unhappiness and block their progress. The fields of vocational and educational guidance have provided further enlightenment about those counseling techniques which can be of utmost usefulness to management.

What emerges from a thoughtful perusal of all these fields is a conclusion concerning the interrelationships of the various aspects of this human relations situation. All of the problems appear to be of the same genre. It reminds us of the transference of knowledge and principles among the several branches of the physical sciences. Just as one of the great contributions of modern science is the idea of the comprehensive, all-embracing unity of the physical world, and as the dividing lines between physics, chemistry and biology grow thinner and fade away altogether, so too, in the realm of human relationships, the conclusions of the anthropologists have significance for industrial managers; the psychoanalysts can shed light on the handling of shop grievances. As the areas of knowledge are opened up even further, it becomes important that management have a working knowledge of all of these related fields in order to avoid the "installation" of narrowly mechanistic "programs" to achieve this or that specific psychological result; in that direction lies the danger of misusing a force more potent than nuclear energy.

The proper use of this scientific knowledge requires first of all a profound respect for the sacredness and supreme value of human personality and the dignity of human beings. It is interesting to note that advanced science frequently gets around to ratification of ancient religious and philosophical concepts. From the mechanistic science of the nineteenth century, which somehow lost sight of the value of human beings, and which caused people to be placed in the category of things, we are gradually going forward to an increasing acceptance of the organic oneness of the universe and the principle of the dignity of man.

Recognition of the value of human personality has become a scientific principle, a key factor to be reckoned with in the attainment of any objective. Managers have

to recognize the subtle interplay of factors and maintain a proper balance among their physical, economic and human resources. For the greatest untapped natural resource available to mankind is the intelligence, the skill, the knowledge and the interest of people. But it remains hidden in the worker group for productive purposes so long as those on the management side resist making the change necessary in their own attitude and neglect to operate within the framework of acknowledged scientific laws of human behavior.

Synthesis by Management

The important task for the administrator is to achieve a synthesis from the various results of all this research and analysis and to implement the knowledge achieved for improved managerial practices. The scientific facts derived from the research have no value in themselves; there is too much evidence of how such scientific knowledge can be put to destructive purposes. Management has the opportunity to take leadership in putting this knowledge to work in practical ways for human betterment.

It does not do for the line officer to say, "I leave these

things to the personnel department." While of course the personnel department can help in a staff way, it remains the job of the practical supervisor, executive and administrator to use this kind of knowledge just as he uses standard cost data, market analysis, knowledge of tensile strengths and various other facts as practical guides.

The achievement of the highest level of human effectiveness through care in creating an environment within which there is a proper and healthful interrelationship among human beings—both management and labor—is at least as important as the oiling, repair, and careful maintenance of our machines, and as necessary for production.

Secretary of State Marshall, in a speech before the annual CIO convention in Boston, observed that the basic problem of world recovery is production. We here in the United States have the physical plant and the technological know-how, and we have at hand opportunity to use the knowledge and skills derived from the social sciences which, taken all together within a democratic framework of administration, can bring about a new era of productivity, not only for American economic security but for world peace.

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Tomorrow's Cost System

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TODAY'S cost system is planned in terms of a tradition, as a mere extension of double entry book-keeping. It has traditional accounts, grouped into traditional subsidiary ledgers, tied in with traditional control accounts, and dominated by traditional balance sheets and income statements. As with the traditional house plan, it looks to the past for its data, and arranges these data in traditional patterns. Tomorrow's cost system will be planned in terms of the activities of managers who use cost data. The materials and techniques are all at hand. All we need is sufficient courage to shake off the shackles of tradition.

Present Disadvantages

In today's cost system, classifications and evaluations tie into and support the legal-financial data of balance sheet and income statement, instead of tying into and supporting the activities of management. Today's cost system is too slow. Control data are reported a few days after the job or month to be controlled is over and embalmed in unchangeable history. Data developed by today's cost system are too vague. Costs are divided, allocated, reallocated and merged until components are no longer accessible for managerial planning and control. For example, kilowatt hour charges, power factor penalties, peak charges and load factor costs are all merged into one purchased power account, which is allocated to operating and service departments. That part charged to service departments is merged with other expenses and reallocated to operating departments, where it is again merged with other items and reassigned to jobs. In standard cost systems, variance accounts merge variations experienced on all jobs processed during the period, and may include clerical errors as well. All this is done "to get values for inventory accounts for the balance sheet." No real attempt is made to discover and provide data management needs in order to plan and control operations intelligently.

Present day conventional cost data are irrelevant and incorrect. Sunk costs are merged with controllable costs. Historical, sometimes ancient, data are used where current data are needed. Quantity discounts and

overtime wage premiums are averaged out over all production, making incremental cost calculations virtually impossible. Finally, cost data are expensive. Endless repetitive details are reported and recorded. Trivial, never-to-be-repeated operations are reported and added in. A great mountain of paper is processed through a long chain of clerical operations, all to prove the clerical accuracy of irrelevant, obsolete, vague data!

So much for tradition. Now let us get down to tomorrow. To borrow an example from another profession, the modern architect begins his planning by analyzing the family that is to live in the house. How big is the family? What is its age and sex distribution? What are the activities and hobbies of each member? How will these activities change as each grows older? People eat, sleep, work and recreate in houses. They need light, air and heat, gadgets and places to store gadgets and clothes. In terms of emerging patterns of activities and needs and of available site, materials and money, the modern architect evolves his designs.

Similarly, the modern systems man begins his work by analyzing the enterprise that is to use the system. How large is it? What is its organizational pattern? What are the functions and activities of each member of the organization? How are these functions and activities likely to change as the enterprise grows and adapts itself to its continuously changing environment? What data are needed by each functionary to enable him to plan and carry out his duties effectively? Managers on all levels plan activities and control subordinates engaged in working out the plans. These managers need data as a basis for planning and as a means for controlling operations. In terms of these emerging patterns of activities and needs, and of the peculiarities of cost behavior, the modern systems man evolves his installation. The new approach is pragmatic, dynamic, relative, operational.

Managerial Activities

As prospective system builders, let us analyze the activities and needs of prospective systems users. Frederick W. Taylor divided managerial activities into

planning and performance. Let us briefly consider the content and method of each.

1. Planning Enterprise Activities

Managerial planning includes formulation of policies, design of organization, selection of resources, and establishment of techniques and procedures. While policies are relatively general and permanent plans, they remain subject to reconsideration as conditions change. Most companies, for example, encounter streams of suggestions for new products, some of which require reconsideration of company policies. Manpower shortages and pressures from governmental agencies may cause changes in compensation policies. As companies expand and policies change, the pattern of organization must be adjusted to fit new conditions. A recent example was the almost universal development of Priorities Managers to cope with War Production Board Regulations. As equipment becomes obsolete or inadequate, new equipment must be selected. Products and processes also become obsolete. Changing needs and new designs arising from technological progress render selection problems highly dynamic. With new policies and new equipment comes a need for new techniques. Thus, development of tabulating equipment resulted in many changes in accounting techniques.

Planning, in this sense, is fundamentally choosing. What changes should be made? How can management tell when the time to change has arrived? A planning problem arises when an alternate possible course of action is discovered: e.g., should an old delivery truck be repaired or replaced? The manager projects each alternate as a detailed program of future action, ascertains differences among these programs measured in terms of ultimate effects on enterprise profit, chooses the most attractive, and later reviews his choice to determine whether a need for reconsideration exists. The accounting problem involved is one of ascertaining how the composition and importance of costs and incomes change as one program is substituted for another.

2. Controlling Operations

Managerial control includes control of achievement, of costs and of investments. Having selected a plan, management reformulates it in terms of individual responsibilities for carrying out each aspect of the plan. Individuals are made responsible for achieving

definite ends within definite limitations as to costs and investments. For example, the sales manager is made responsible for securing a given volume of sales without exceeding certain limitations as to selling costs permitted him. He is further restricted as to investments in branch facilities, display fixtures, office equipment etc.

Control consists of securing conformity to plans. Individual employees are the operational units by means of which managerial plans are brought to fruition. These individuals must be directed, motivated, inspected and corrected. This involves establishment of standards in terms of individuals' responsibilities, communication of plans and standards to subordinates, compensation for performance, measurement of results in terms comparable with statements of plans and standards, and remedial action wherever performance is found deficient as compared to plans. For example, individual sales quotas are set; commissions, prizes or praise are given to obtain motivation; sales are recorded, classified by salesmen; and quotas and sales are compared. When sales are below quota, a remedy is sought and applied: the product may be redesigned, new types of customers may be sought, new sales aids developed, or the salesman may be retrained or replaced. The accounting problem concerns reclassification of plans and standards according to individual responsibilities, followed by accumulation of performance data classified and measured in comparable terms.

Requirements Imposed Upon Tomorrow's Cost System

These activities and problems of management determine the broad principles underlying an effective cost system. Data appropriate to one managerial problem are not necessarily appropriate to all. Some problems will require one classification of data, some another. Evaluation of certain items will vary from problem to problem.

1. Classification

Managerial planning requires classification of accounting data according to rival programs of operations. For example, problems of sales policies may require classification of sales and of selling expenses in various ways; by products, by territories, by kinds of customers or by sizes of orders. On the basis of accounting data classified in these ways, management may decide to drop a product line, extend operations into new territories, cater to some economic classes

and not to others, or stop paying commissions on sales orders below some established size.

Establishing managerial control of subordinates requires classification of expenses according to authority to incur expense. Expense items having been classified according to the part each plays in alternate plans in order to choose rationally among the plans, they must be reclassified to establish responsibility for success of each phase of the chosen plan. Control of investment, and of costs associated with investments, requires classification of assets according to administrative responsibilities.

Managerial accounting must use a classification which can be easily revised as various needs arise. Two principles are essential to securing such flexibility in classification of data.

First, transactions should not be divided unless they are additions of computed items. Each business act should be recorded whole. For example, two friends had lunch together. One ordered stew, coffee and pie à la carte for 85 cents. The other ordered a standard lunch and got soup, stew, potatoes, beans, coffee and pie, for 75 cents. How much did the soup, potatoes and beans cost the second man? As one of today's cost accountants, he allocated the total to the items in proportion to their calory content. He was allergic to beans, but ate them and suffered all afternoon because he couldn't bear to charge them off as waste material.

Second, transactions should be merged only when components of the resulting class of data are homogeneous along all dimensions of all managerial problems, be they problems of planning or of control. This rule forbids merging overtime with straight time wages, merging operating and set-up costs, or merging the four component power costs previously mentioned. Such items follow different rules and must be kept segregated and thereby available for later analysis.

2. Evaluation

Values have meaning only in terms of problems and situations. The frame of reference must be known before evaluation can have significance. In approaching problems of managerial planning, values should be assigned which clearly reveal the differences among the plans. For example, if one plan calls for greater production than another, the physical costs associated with each plan should be estimated according to the law of behavior followed by each outlay as volume is changed. Estimated physical outlays should be con-

verted into pecuniary terms according to the price behavior imposed by the real economic world, and not according to the rules of grade school arithmetic. The law of diminishing returns will influence estimates of physical outlays; quantity discounts and overtime premiums will influence their pecuniary evaluations. All calculations will be affected by indivisible units, by idle capacities and by sunk costs. In general, neither physical changes nor their pecuniary implications can be expected to follow a linear law of direct proportionality.

In approaching problems of managerial control, elements to be controlled should be determined and classified according to administrative responsibilities. Each should be weighted according to its importance as determined by its effect on the ultimate objectives of the enterprise, and according to the abilities of the to-be-controlled subordinates to influence the item. For example, a certain product may be ruined in final assembly by poor soldering or by rough handling. The foreman's efficiency is a composite of his skill in avoiding these two causes of spoiled work and of other factors which would further complicate the analysis. In constructing an index of the foreman's efficiency, or to serve as a basis for bonus payments, each factor should be represented with appropriate weighting. In terms of influencing enterprise profits, poor soldering may be more important than rough handling; more units may be spoiled in this manner, salvage costs may be higher, work may be spoiled after a greater amount of labor and materials have been expended. On the other hand, rough handling may be entirely within the control of the foreman and his subordinates, while poor soldering may be partly due to poor cleaning by a prior processing department, to poor quality solder or flux provided by the purchasing department, or to poor workmanship—only the last of which is subject to control of the foreman.

Valuations change with every problem and every situation. Methods of approach to valuations are the same for any one type of problem, but differ for different types. Valuations for managerial planning are always approached in the same general way, although different values will be found for different problems. Valuations for managerial control are always approached in a different but equally consistent manner. Again, various problems of control will produce different values although the method of estimated values remains the same for all such problems. Surely something is fundamentally wrong with a cost technique which provides a single set of values for all managerial problems!

The Mechanics of Tomorrow's Cost System

Can we devise a system to produce cost data classified and evaluated in all the ways needed by a management beset with a variety of problems of planning and control? Can we provide data appropriate for problems not yet foreseen? Can we build our two basic rules into a practicable system for cost estimating, recording and analyzing? We can, here and now, in a somewhat generalized, skeletonized form. Details must wait until we know the specific character of the management that is to live in our cost "house of tomorrow."

1. *As to Materials*

The engineering department will establish specifications for every materials item entering each product. It will also calculate the quantity of each item needed for one unit of each product. For example, the amount of metal needed for a casting can be found from the weight of the finished part adjusted for material removed in machining and for gates and sprues. The amount of material needed for a sheet metal part can be determined by preparation of cutting drawings showing how a sheet is to be cut or stamped. The engineering department can virtually always develop workable standards of quantity and specifications of quality.

A purchase record is kept with a page or card for each specification. Successive purchase lots are recorded, showing date, source, quantity, price, discounts and amounts. A "remarks" column provides space for notes concerning desirability of the source. By keeping purchase data entered currently and by follow-up of deviations and irregularities, control is established over purchase prices, taking of discounts, purchase in economic lot sizes, and use of approved sources. No job order cost accounting system, no process cost accounting system, no standard cost accounting system will add one iota to this control of prices and other purchase factors.

Purchase requisitions for important materials originate in production schedules based on sales budgets. Shipment schedules are exploded into parts requirements and adjusted for lead times, anticipated changes in inventories, repair parts, and for normal waste and spoilage; purchases are scheduled accordingly. Purchase routines follow up orders until materials are received and inspected. Planning department requisitions issue materials to the shop. If inventories are not too large and varied, this gives management complete control over quantities purchased and stockroom invento-

tories. Where inventories are larger or more complex, balance of stores records provide additional necessary control of stockroom inventories. Such records are kept in terms of physical units only. I have never encountered a situation where pricing and extensions are desirable. They are necessary if the balance of stores record is to tie in with a general ledger control account. I doubt if such a tie-in is ever worth the clerical costs of the additional arithmetic involved.

Many minor items such as screws, washers, rivets etc. can be controlled satisfactorily without inventory records by a physical application of the stock limits plan. The so-called minimum is segregated by filling a small box with approximately the desired minimum, adding a tag showing the part number, wrapping tape around tag and box, and throwing it in the bin. Material is issued from the bin until it is empty, then the tape is broken, the tag sent to purchasing as a requisition, and material from the box issued. This provides turnover of stock, is virtually fool-proof and eliminates posting to balance-of-stores records with all the clerical time and errors that involves. These trivial items often constitute only a small percent of the value of the inventory and of materials cost and yet account for more than 80% of the clerical work of a traditional balance-of-stores ledger. Again, managerial control is established by simple procedures aimed directly at accomplishing a specific objective.

The planning department will issue shop orders with materials and parts requisitions attached. The requisitions call for standard quantities of materials to produce the quantity specified on the shop order. Allowances can be included for normal spoilage, often by including a standard over-run in the shop order. Inspection and stockroom can see that the proper number of acceptable units is returned by the processing department. In many shops the foreman should be given authority to write supplementary requisitions for materials to replace abnormal spoilage or loss. Such requisitions should be a different color and be routed to the superintendent or one of his assistants to allow an immediate follow-up for ascertaining causes, instituting remedies and adjusting other plans. No job order cost accounting system, no process cost accounting system and no standard cost accounting system will give more complete or more immediate control of usage of direct materials in the shop.

The approach outlined gives management an opportunity for immediate action when failures occur. Management obtains complete control of material costs on

a detailed, current, item-by-item and day-by-day basis. Much posting, much clerical computation, many errors and all allocating are eliminated and managerial time is economized by applying the exception principle to control of operations.

2. *As to Labor*

The personnel department will establish job specifications and wage rates for each job in the plant; e.g., class C turret lathe operator, or class B milling machine set-up man. The methods department will study every set-up and operation; establishing standards covering materials, tools, equipment, fixtures, gauges, methods and working conditions, and setting set-up and operating times. Synthetic times built up from carefully established standard elements seem more desirable because of the greater consistency in resulting rates. The methods department also assigns each set-up and operation to the job title and wage rate which would normally apply. Incentive wages, particularly the standard-hour plan on either an individual or a group basis, are generally desirable and more often simplify cost estimating than otherwise.

In many plants, daily departmental efficiency records are compiled. Partially entered time tickets are sent with standard practice instructions and shop orders to processing departments. The time tickets carry information as to shop order number, part number, operation number, machine class, standard job title and standard time. The factory enters clock number, time started, time finished and pieces completed. This provides data for the daily departmental efficiency record, which shows for each operation performed in the department the operator's clock number, machine number, order number, part number, operation number, standard job classification, actual job classification, number of pieces, standard time, actual time and percentage of standard to actual time. A clerk can circle data showing deviations large enough in size and in percentage deviation to be significant. Copies go to superintendent and appropriate foreman, usually by noon of the following day. This makes possible quick and precise managerial follow-up of troubles seeking causes, instituting remedies and adjusting plans. No job order cost accounting system, no process cost accounting system, and no standard cost accounting system gives as prompt and as precise control reports.

Periodically these data can be resorted and summarized by employees to yield individual performance records for personnel department files. Here they be-

come an important factor entering into considerations of merit increases, transfers, promotions and discharges. They may provide the backbone of a measured day work incentive system. They also provide actual production data for testing the employee selection devices used and for guiding and reviewing the effectiveness of training methods.

3. *As to Burden*

Prices of indirect materials and indirect labor are subjected to controls similar to those sketched for directed material and labor. The physical quantities used may be tied to production or to regular schedules; e.g., cutting oil and truckers' time may be compared with a standard based on fixed maintenance schedules to keep performance up to par, and by comparison of associated cost elements with work loads to keep costs down.

All this is conveniently approached by budgets. A variation of the flexible budget uses a four column report showing normal budget for anticipated work loads, an adjusted budget corrected for actual work load, actual performance and percentage variation. Some items are in dollars, some are shown in hours, others are measured in terms of numbers of employees, pounds of steam, etc. Work loads may be in terms of standard hours, number of orders or whatnot. Note that an item may be a work load for one department and a cost for another. This will be true of most services rendered by service departments to processing departments. Typically, the department benefitted will be responsible for the physical amount of service used and the service department will be responsible for the costs of providing that amount. Items not subject to control by a department head do not appear on his budget. This again largely avoids clerical work wrapped up in fictions of allocations. By proper organization and assignment of authority and responsibility, almost all burden items can be assigned wholly to single individuals possessing undivided responsibility for each item. For example, never chop up and allocate the superintendent's salary to departments under him; foremen have no control over the item.

Differences Between Old and New Budgets

These budgets differ from traditional budgets by their emphasis on matching costs against work loads, by using various physical as well as financial measures of both costs and work loads, and by virtually complete absence of allocated items. Do not assign a percentage of personnel department expense to the punch press

department on a basis of proportion of punch press employees to total work force. Instead, measure punch press performance directly in terms of labor hours required to meet the work load (measured in standard hours), and the number of severances, hirings, transfers, promotions, grievances, etc. originating in the department. These, in turn, become parts of the work load of the personnel department, affecting its adjusted budget figures against which its actual costs will be judged. Finally, these unorthodox budgets may be split into a number of reports containing items of different periodicity: weekly, monthly, quarterly or annually.

Again, the approach is pointed directly at management's need for control data. It supplies these data as promptly and as sharply focused as possible. It provides for maximum use of the exception principle. The whole system of control—materials, labor and burden—is directed at what Prof. Ross G. Walker calls "policing at the source." General financial accounting is allowed to carry the burden of balance sheet and income statement, for income tax and credit purposes. Tomorrow's cost system establishes managerial control of operations.

Use of Cost Data for Managerial Planning

How about managerial planning? Such control records and procedures police performance. They also police standards. Deviation of performance from standard calls for investigation and remedy. The remedy may prove to be revision of the standard because changed conditions have made old standards obsolete. By thus keeping standards current and reliable, one can safely use them for constructing managerial plans. The myriads of detailed physical and pecuniary standards can be built into rival programs. Management can add, deduct or adjust items, price out physical items at current purchase or current sales market, at any combination of discounts appropriate to its problem. Sunk costs can be eliminated from some programs and fixed costs from others. Cost and income estimates can be fitted to the requirements of problem and situation. Finally, management may make such adjustments as are necessary to make its formulations of rival programs comparable. Making due allowance for intangibles, management selects the most attractive program and goes to work.

How does all this apply to preparing price quotations? Think of a small company directed by a manager who is at once founder, chief designer, general manager and star salesman. Such a man often accumulates in his memory all the data gathered by the best

of cost systems. His common sense selects, classifies, evaluates, analyzes and interprets this information to best effect. Imagine such a commonsense manager preparing a bid for a contract job. It offers opportunity to re-work spoiled materials otherwise beyond salvage, so he whittles the materials cost. The job threatens to push other work into overtime on key machines, so he adds in overtime premiums he will have to pay on other jobs if he lands this contract. Other machines which could be used are operating below capacity. If he can absorb part of this idle overhead, he will lose less than if these machines continue idle, so he cuts his figure on machine charges. By consolidating purchases for this and other jobs, he can secure additional quantity discounts, so he makes an allowance for reductions of materials costs on other jobs. And then he pieces cost estimates together, logically and with direct reference to his money-making objective. Finally, he reaches a minimum price below which he prefers not to take the job. Then, in terms of apparent competition, the evident urgency of his prospective customer's need, and prospects for future repeat business, he sets a price as much higher as he believes he can get. He tries not to lose business to competition and not to sacrifice such important intangibles as customers' good will.

Tomorrow's cost system must accomplish a similar end in a larger enterprise where all facts and analyses cannot be carried in one man's mind. Clerical and managerial time can be economized by establishing standard hierarchies of subtotals of costs, with all component details dissected and nicely laid out for omission or adjustment as circumstances require. The standard hierarchy must provide sufficient flexibility to cover different size prospective orders and different levels of utilization of plant capacities. It must enable evaluation of component details at incremental or opportunity values as appropriate. It must give effect to the laws of variation of each detail. All this is accomplished in a rough sort of way on two forms worked out for each part. Assemblies or finished products are built up by totalling estimates for component parts and assembly operations. Since this is done in the same spirit as the estimates made for component parts, only the latter need be analyzed.

The first form analyzes set-up and operating labor and burden. It carries date and part number in the heading and provides columns for operations and cross totals. Lines are provided for entering the following data into the columns: operation, department, machine, operating hours per hundred, job title and rate, operat-

ing labor cost, variable burden (that which could be avoided if job is not taken), variable operating cost (total of operating labor and variable burden), normal burden (long-run break-even burden), normal operating cost (total of operating labor cost and normal burden), standard set-up time, set-up job title and rate, set-up labor cost, variable burden on set-up time, variable set-up cost, normal burden on set-up time and normal burden cost. All these data are relatively permanent. They do not need to be recalculated every time a job goes through the plant. The form provides convenient totals and subtotals while maintaining accessibility of detail for adjustment when circumstances require.

The second form incorporates totals found on the first with other data to provide basic price estimates. It also carries date and part number in the heading, and provides columns for various size orders; e.g., 50, 500, 5000. The upper section is devoted to an analysis of materials cost estimates. Descriptions of all component materials are given on successive lines and costs are estimated for each column, giving full effect to varying quantity discounts. A materials handling charge is added as a percentage found by dividing normal costs of operating, purchasing, receiving and raw stores departments by normal cost of goods purchased. This is rough but better than carrying through as burden allocated to processing centers and thence to product. Provision may also be made for scrap credits.

The cost of engineering design and initial tooling is estimated and assigned directly to the part. If sales expects only one order, the total of these costs goes in. In some instances, these items may be spread over two or three orders, or customers may be quoted so much for engineering and tooling on the first order only. The figure may be identical in all quantity columns, or it may be larger for bigger orders to reflect more elaborate tooling. It would never be proportionate to size of order, and is, therefore, virtually always mishandled in traditional cost systems.

Cost of clerical handling is found by dividing costs of production and cost departments by number of orders processed. The figure is a constant for all columns of all cost estimate sheets. This is a rough approximation of reality, but much closer than the usual practice of prorating to departments and subsequently charging to jobs as part of a machine-hour burden rate.

Distress Pricing

As a basis for distress pricing, set-up cost with variable burden found on the first form is added to these items. If all quantities estimated would be run in a single order with identical tooling, the figure is the same for all columns. Variable operating cost is added at so much per hundred pieces. The resulting total approximates a figure below which our cash disbursements caused by the order will exceed cash revenue therefrom. Management tries to get a higher price to cover at least some of the fixed costs.

In normal times, normal set-up and operating costs are substituted for variable, to get cost bases including all costs which must be covered if the company is to break even over the long pull. A higher price will provide some profit and recoup losses incurred in periods of distress pricing.

In periods of intense, overtime operations, 50% is added to all labor items. The resulting peak load price basis gives a figure below which it is better in the short run to refuse business. This short run view is softened by consideration of such intangibles as preserving customer good will with an eye on repeat business in slack times, and general social values. Nevertheless, the calculation serves to stiffen the backbone of the sales department when confronted by demands for price concessions.

Conclusion

This is of course a bare outline of an approach to the design of tomorrow's cost system. Enough has been said to demonstrate in theory and application the need for different classifications and evaluations for different managerial problems and situations. The way in which some items change from problem to problem has been shown and methods of approaching problems of managerial control and pricing have been indicated.

Analyses of other cost items such as rent, depreciation and supervision provide other surprising deviations from traditional cost treatment. Many other managerial problems such as plant location, determination of economic lot sizes, and resolution of "to buy or to make" questions give further opportunity to employ the opportunity and incremental cost calculus. Analysis of other items and other problems would multiply the evidence showing the obsolescence of traditional cost accounting and the need for tomorrow's cost system.

Management - Labor Cooperation In Cutting Costs

A Statement by the
LABOR COMMITTEE ON NATIONAL POLICY
 of the National Planning Association

OUR ECONOMIC efficiency as a nation depends basically upon our productivity. Our national productivity is particularly important at this time because the economy is entering a period of critical readjustment of prices and costs. Fortunately for sound policy, virtually all serious discussions of costs have been in terms of productivity rather than in terms of wages.

All parties to production and distribution—labor as greatly as any—have a stake in rising productivity. For rising productivity is the principal source of our economic progress and increasing wellbeing. Workers increasingly realize that high wages are made possible and continuation of their rising trend can be insured only by the high and increasing productive efficiency of our economy; businessmen increasingly realize that the answer to shrinking profits lies not in wage cutting but in the increase of productivity.

Productivity is simply the measure of how efficiently we Americans are combining our labor, our equipment, and all our other resources in the business of production and distribution. Not only improved personal efficiency of workers, but better management, better relations between labor and management, better machines, new products and new industries, better organization and methods, better information and broader research, better transportation and communication, and many other factors contribute to the increase of productivity.

At the very heart of the matter, moreover, as our wartime experience demonstrated, lie human attitudes. Machines have a standard efficiency, but the efficiency of the human beings, whether managers or workmen, using those machines and developing new ones is powerfully affected by the goal they have before them. We must seek to make the peacetime goals of our economy as real, as important, as morally compelling as were its wartime goals.

For many years the American economy has forged steadily ahead in productivity at a pace outstripping that achieved anywhere else on earth. Over the past fifty years this progress has averaged, in manufacturing, about three percent a year. During the war this rise was obscured by many factors which seriously affected the statistical measurements. There is recent evidence,

however, that a strong upturn in productivity is now under way, one which may well equal or even exceed the striking increase which followed the first war. It is not too well known that, starting in 1920, the second year after the end of hostilities, productivity in manufacturing increased ten percent a year for three successive years.

Management's Job

Our concern today must be to reinforce the current rise and to carry it forward. Government can provide effective aid through policies that head off depression and give business and labor freedom from fear of bankruptcy and unemployment—freedom therefore from constraint to protect markets and jobs by restrictive practices. Labor can make effective contributions—as our experience in the war demonstrated—if the setting is provided and management genuinely seeks labor's participation. But it is management that must lead the way in achieving increased productivity. This is indeed management's job; questions of efficiency lie at the very core of managing a business.

Even though the initiative lies with management, labor's contribution to increased efficiency can be extremely significant. But unless labor's cooperation is actively enlisted maximum progress cannot be hoped for. Let management set the stage, explain the goals, and join with labor to agree on rules that are fair and the way will be open for management to receive powerful labor support and follow-through.

The ending of hostilities ushered in a period during which attention was focused primarily on the problems of reconverting our resources to peacetime production. With reconversion now behind us, both management and labor can serve the general welfare and their own best interests by considering how to go about applying the lessons of war production to the problem of increasing our peacetime productivity.

Wherever unions find it possible to take the initiative in making operations more productive—and where past experience indicates that management will welcome such initiative—we urge that they do so. As indicated, however, we are convinced that the first step must in general come from management.

We urge managements everywhere in American industry to invite the unions they deal with to sit down with them and explore how to eliminate inefficiency in production and distribution. We are confident that such invitations, issued in good faith, will evoke a surprisingly satisfactory response from the unions. Our confidence, we may add, is not based on theory but is rooted in concrete examples of successful teamwork between management and unions.

There are, as everyone knows, many types of restrictions on production. Some of these have been highlighted by official inquiries. Others, particularly those on the part of labor, have become bywords by reason of widespread publicity given them. It is easy for pot and kettle to call each other black. Management and labor must, however, work together to remove the soot wherever it may be found.

Restrictive Practices

We have called for teamwork between management and labor in improving operations generally. We especially stress the need for such teamwork in overcoming restrictive practices. Teamwork is needed because the restrictive practices of management and of labor so frequently go in pairs. In some cases, the insecurity of markets has led management to restrict output and this in turn has forced workers to adopt restrictions designed to protect their jobs. In other cases workers may have been prompter than management to recognize the threat of insecurity and management's practices may have followed rather than preceded labor's.

We stress insecurity of markets and jobs because we are convinced that this is the root cause of restrictive practices. It follows that, to the extent this insecurity is the result of the swings of the business cycle, a complete solution must include effective policies, public as well as private, to insure a sustained high level of production and employment.

The methods which management and labor should follow in cooperating to raise productivity will of course vary from industry to industry and from plant to plant. We should draw on the large body of experience which has developed over the years, before as well as during the war. How far, for example, the labor-management production committees of the war period should be re-established, and with what modifications, must be determined individually. The same holds for the reinstitution of the training programs, which also were so unfortunately abandoned when hostilities ended. Training

can always increase productivity, but today, when happily there is no supply of idle manpower to draw upon to expand total output, it is of especial importance.

There are, however, three general principles that must be recognized in any campaign for increased productivity:

(1) The first of these is that workers must have assurance that the cards are not being stacked against them. They must have no ground to feel that the cost accounts are being loaded with dubious items. Suspicion on this score—no matter how petty the questioned items may be in dollar terms—must be avoided. Many of the practices with which labor is charged are also petty; and, without regard to the importance of either, workers are prone to regard the one as justifying the other.

(2) The second principle is that the passing on of the benefits of increased productivity must be equitable and reasonably clear and certain. As we have said, productivity grows from many sources and neither management nor labor nor stockholders nor the consuming public has an exclusive claim to its benefits. Workers want higher productivity to mean higher wages and lower prices. They want management and stockholders to get their fair shares, too. But they are not interested in stepping up productivity if the entire benefits that result are to go to increase profits which may already be ample. This should be elementary common sense, but it is all too frequently ignored in discussions of industrial efficiency.

(3) Finally, if our national productivity is to benefit to the maximum, any program to increase it must be put in terms that carry a basic appeal to every participant in production. Pecuniary incentives have their place, but they do not and—as men live not by bread alone—they cannot evoke our deepest and fullest, indeed our happiest, efforts. The efforts that we put forth in war were not the desperate efforts of a frightened people. They were the determined efforts of a people who were united by a common vision. That is what we must have in time of peace as well, if we are to demonstrate our full strength, our full capacity for growth.

Teamwork of Production

The United States stands today a giant among the nations of the earth. We are strong and we have the responsibilities that the strong cannot escape. Our national strength lies in our national productivity. If we are to remain strong and if we are to share our strength in binding up the wounds of the rest of the world and helping it to regain a sound foundation for peace and

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prosperity, we must not neglect that source. This is a challenge that must not go unanswered. We know it is in the American people—American labor, American management, and American agriculture—to answer it as

ringingly and as decisively as they answered the challenge of war. We found our answer then in the teamwork of production and it is in the teamwork of production that we must find it today.

Signers of the Statement are:

CLINTON S. GOLDEN (Chairman)
Solebury, Pennsylvania

MARION H. HEDGES
(Vice-Chairman)
Intl. Brotherhood of Electrical
Workers

SOLOMON BARKIN
Director of Research
Textile Workers Union of America

J. A. BROWNLOW
Secretary-Treasurer,
Metal Trades Department, AFL

L. S. BUCKMASTER
President, United Rubber, Cork,
Linoleum & Plastic Workers
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JAMES B. CAREY
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KATHERINE P. ELLICKSON
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H. W. FRASER
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Conductors of America

SANDER GENIS
Vice-President, Amalgamated
Clothing Workers of America

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United Steelworkers of America

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WILLIAM MITCH
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ROBERT OLIVER
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Employees

MAX ZARITSKY
President, United Hatters, Cap
and Millinery Workers Intl. Union

Book Reviews

Constructive Collective Bargaining, by Edward T. Cheyfitz. McGraw-Hill, New York, 1947. 161 pages. \$2.00.

THE author of this book was an important officer of the Mine, Mill and Smelter Workers, CIO. In such a capacity his out-spoken emphasis upon organized labor's obligation to maintain high productivity, to recognize the necessity of measured work, and to accept wage incentive methods was an invigorating voice in economic discussions. These same points have been what countless managers and employers have been urging. Since then, however, he has shifted to the position of assistant to Eric Johnston, President of the Motion Picture Association of America. The question now is how he is saying these things and if anything new is contributed by this small volume.

The basic propositions are simple enough and excellently stated: Collective bargaining must be dedicated to the objectives of high level employment, full production and advanced levels of consumption; to attain this goal both sides must keep their eye on the mystic letters PMH (production per man-hour). "Increasing productivity is not just a matter of working harder. It is primarily a matter of working better" (p. 26). Labor must be won over fully to the concept of a fair day's work as determined by fair-minded scientific management. "The perfection, not the abolition, of time study must be labor's position" (p. 62). "Constructive collective bargaining is the successful approach to this most complex of factory problems — work measurement" (p. 64). "The incentive wage is the greatest single stimulant to increase output per labor-hour" (p. 69).

But how obtain such a radical change of attitude among workers, especially in the mass industries? There, the author states, constructive collective bargaining has not been adequately tried. Here his proposals seem to indicate that he is in a transitional stage of thinking in which he has not yet lost his labor point of view and not yet acquired a realistic management outlook. For he proposes that management abrogate its functional rights, that is, that policies be determined jointly by management and labor, and that only the *administration* of agreed-upon policies become management's exclusive sphere of operation.

Let us examine this suggestion in more detail. Management shall have merely the right to propose basic policies and unions shall have the power of "joint formulation . . . on *all* matters that directly affect the

workers in the plant" (p. 35). (The author himself underscores the word "all" although other portions of the book seem contradictory.) As the author optimistically sees it: "Management outlines the desired objectives and procedures. A complete discussion takes place. 'Production plus democracy' guides both sides."

How perfect! But if the management is sincere but not too persuasive, if some demagogue in a union throws the workers off management's scent, or if the workers are too short-sighted in their view, are basic policies of management to be permanently ruled out by this abrogation of powers? Or, if workers do "accept . . . the philosophy of production" and then change their minds, will they return the powers they acquired? The old example he himself cites, of union pressure which has kept riders on the abolition of the stop watch and incentive-wage plans in the military appropriations acts for over a score of years, seems not to have been used. Yet the author states: "This union participation in policy administration does not conflict with management's basic right to manage" (p. 36).

What objective material is provided to prove the validity of such a new and crucial principle in management? While the volume is full of chatty illustrations there are few citations of sources, so that one does not know how much it comes from the author's experience and how much is hearsay and secondary material. That the latter is true of much of it would seem obvious. Much of the book is preachy. To make it more convincing a more cogent demonstration must be provided of the ways in which labor-management relations may be effectively conducted.

HERMAN FELDMAN

Elements of Public Administration, edited by Fritz Morstein Marx. Prentice-Hall, New York, 1946. 637 pages. \$6.65.

New Horizons in Public Administration, A Symposium. University of Alabama Press, 1945. 145 pages. \$2.00.

EACh passing year gives new impetus to the emerging fields of public administration at the local, state, national and international levels. Here are two timely works in this field, prepared and published under separate auspices but tied together by a common and important theme. The management philosophy which pervades these volumes reaches a degree of maturity seldom found in the literature of public administration.

Crammed within the covers of these books are many fresh viewpoints and hard facts, based on the pooling of firing-line experience and genuine scholarship. In both publications the subject matter has been carefully organized, although the arrangement of topics differs sharply from that of traditional textbooks. The presentation is accurate, thorough and clear, but perhaps not colorful enough to arouse wide popular interest. The contributors and their assigned topics have been well matched throughout.

The two volumes have much in common with respect to subject matter, group authorship, and basic principles emphasized. Both rise well above the technical level and come to grips with topside administrative problems. Fundamentally, they deal with the many questions of attaining effective management of the public business in a political democracy.

Neither publication has a bibliography, although both contain adequate footnotes — if you like footnotes. An index appears only in the volume dealing with "Elements." The two books suffer, but not seriously, from a lack of charts, pictures, and other graphic material.

A notable feature of both books is the clear style of writing used by most of the contributors. Only here and there does bureaucratic gobbledegook interfere with readability. Such forbidding phrases as "nonhierarchical sources of power" and "the prerequisite for concert among the impinging functional factors" stand out because they appear so seldom. These authors are not all professional writers, but they know what they are talking about from first-hand experience.

Most students of government agree that outright corruption in the public service is comparatively rare. Indeed, the ethical standards of the civil service are now so high as to be normally taken for granted. Assembled here, however, are some of the more common examples of inefficient public management: routinism, red tape, mediocre supervision and lack of incentive. Even more important are some of the answers given as to why we too often have ineffective management of the people's business. The social and political environment in which public administration operates is scrutinized through trained eyes.

A sort of practical idealism or realistic optimism runs through both works. The authors point out that the administrative gains in all levels of government during the past decade or so are not widely appreciated, but are none the less real. Descriptions of day-to-day improvements in municipal purchasing, state personnel practices and federal budgetary procedures may be found in pro-

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Foreword by Harlow S. Person, Former Director, Taylor Society.

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fessional journals but scarcely in newspaper headlines. Depressions and wars, elections and legislative debates, atomic energy, and the personalities in high public offices have combined to make government newsworthy in many ways. But little is said about the vital administrative ability required in the carrying out of public policy. It is refreshing to find such an objective but vigorous set of views centered on this point.

Four pages of fine print are used merely to identify the fourteen authors who in turn produced the twenty-five chapters which make up *Elements of Public Administration*. Fritz Morstein Marx, who edited the entire book, is also responsible for chapters on "The Social Function of Public Administration" and "The Departmental System." Like most of his collaborators, he has been a student, a teacher and a practitioner in the field of which he writes.

James W. Fesler discusses independent regulatory establishments and then goes on to present what has been called "the best brief statement available anywhere on the considerations affecting administration in a field service of government." George A. Graham succeeds in putting life into the subject of legislative and executive responsibility.

On the topics of government-owned corporations and legislative-administrative relations, V. O. Key has something to say which should interest not only students of government but also those in private corporations who read and listen in related fields to gain perspective. Avery Leiserson takes up three main items — the study of administration, interest groups in administration, and administrative policy-making.

Milton M. Mandell accepts the tough job of trying to condense a discussion of personnel management into one chapter. He does a good job of summarizing, but could have used more space. Elsewhere, however, the book is full of human relations material. Virtually every chapter bursts forth with something about patronage, pay, motivation, unionization or the like. This is as it should be if we accept the principle that personnel management is the responsibility of all who direct, supervise or influence people at work.

Similarly, the important topic of financial administration appears to be limited to one chapter. Concentrating largely on budgeting and auditing activities, Harvey C. Mansfield offers a well-documented and informative discourse. We find again, however, that fiscal considerations appear in many other places throughout the chapters. Mansfield also writes on informal organization, bringing out facts of administrative life largely ignored by politi-

cal science textbooks and somehow missing on organization charts. Here we find discussion of the power and influence of the personal secretary, the personal friend and the well-informed person, whatever his title may be.

Don K. Price makes a stimulating contribution on democratic administration. In related fields, Henry Reining, Jr. effectively presents some original ideas on middle management and work supervision. Management men in industry and government will profit by Wallace Sayre's useful but too brief treatment of employee motivation under the heading of "Morale and Discipline." Similarly, Donald C. Stone's chapter on "Administrative Self-Improvement" is applicable over an area well beyond the public service.

An introductory chapter, an enlightened discussion of bureaucracy and an analysis of the role of the chief executive are presented by John A. Vieg. Dwight Waldo takes up the topic of administrative procedures.

Frankly labeled a symposium, *New Horizons in Public Administration* lacks some of the editorial continuity of the first book. Nevertheless, it looks forward hopefully on social and economic fronts and contains much of practical value to all who share responsibility for improving the management of the government business.

In this set of six papers, Gordon R. Clapp's discussion of the TVA as an example of utilizing the administrative resources of a region stands out. Leonard D. White and Marshall Dimock contribute substantially in their respective discussions of legislative responsibility and administrative efficiency. Donald C. Stone appears again, this time giving some helpful hints on the role and methods of the government executive. Field organizations and staff supervision are covered by John D. Millett and the curtain is rung down by Arthur W. McMahon in his chapter on administration of the international affairs.

HENRY F. HUBBARD

Federal Personnel Council
United States Civil Service Commission
Washington, D. C.

Handbook for Discussion Leaders, by J. Jeffery Auer and Henry Lee Ewbank. Harper and Brothers, New York, 1947. 118 pages. \$1.75.

TWO professors of public speaking present an outline and some pointers on the subject of holding meetings. As a ready reference this can be helpful to a large number of people faced with the problem of meeting arrangements. Such a book can serve as a primer and guide to the beginner who has many practical, immediate problems to solve.

Anyone who has had extensive experience with the

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conference technique, on the other hand, would discover many serious faults of omission in the volume. For instance, it does not give space to the newer knowledge about the dynamics of group relationships. And the section on the "Role of the Conference Chairman" neglects, among other things, to point out what a chairman can do positively to attempt to have disputes resolved. The authors merely state that skill is necessary. What the skill is and how it may be acquired are not

covered. However, the book is obviously not intended for the use of advanced students and practitioners.

An improvement could be brought about by the inclusion of some of the basic and fundamental works in the reference list on page 113. For instance, *The Art of Conference* by Frank Walser should be mentioned as well as the works of Beckman, Cushman, Shellow and Harmon, and Hunt.

EVELYN BUCKLEY

Forthcoming Chapter Meetings

of the

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Chapter	Date of Meeting	Subject and Speaker	Place of Meeting
Detroit	December 3, 8 P.M.	"Work Simplification": Allan H. Mogensen	Engineering Society of Detroit
Louisville	December 3, 6:30 P.M.	"Training to Improve Quality and Reduce Costs": Bartley Whiteside	Kentucky Hotel
Boston	December 4, 6:30 P.M.	"Labor's Demands in the Next Five Years": John Gibson	Hotel Sheraton
Alabama	December 5, 6:45 P.M.	"Cost Control with Standard Costs": L. J. King	Molton Hotel, Birmingham
San Francisco	December 8, 6:30 P.M.	"Leadership Through Consultative Management": Eric Nichol	Engineers Club
Dayton	December 9, 6:30 P.M.	"Building Executive Force": H. F. Willkie	Engineers Club
Lancaster	December 9, 7:45 P.M.	"Labor's View-Points": James B. Carey	Brunswick Hotel
Dallas	December 10, 6 P.M.	"Taft-Hartley Act; An Appraisal of Accomplishments to Date": Charles E. Handy	Stonleigh Hotel
Central Pennsylvania	December 11, 6:30 P.M.	"Export Problems in Relation to U. S. Business": J. P. Elkann	Bellefonte
Kansas City	December 16, 7:30 P.M.	"Increased Productivity Through Methods Improvement": William J. Egensperger	

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